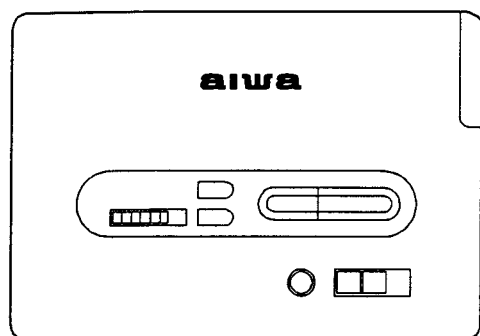


aiwa



HS-PX547 HS-PX447 HS-PX347 HS-LX200



STEREO CASSETTE PLAYER

• BASIC TAPE MECHANISM: 4ZM-1 P1N

• TYPE: AE,AK,Y(547) Y(447)
YK,Y,YU(347) AE,AK(200)

SPECIFICATIONS

<PX547/LX200>

Maximum output
15mW + 15mW (EIAJ 16 Ω)

Power source
DC 3V: Dry cell battery R03 (size: AAA) $\times$ 2
DC 2V: Rechargeable battery PB-45
Household AC power: Using the supplied AC adaptor

Battery life (EIAJ, 1mW output)
Using the rechargeable battery PB-4S
approx: 2hours (10minutes recharging)
6hours (60minutes recharging)
7hours (4hours recharging)

Dimensions
109 (W) $\times$ 78.7 (H) $\times$ 25.1 (D) mm (4 3/8 $\times$ 3 1/8 $\times$ 1 in.)

Weight
172g (6oz) incl. the rechargeable battery

AC adaptor AC-207

<Supplied for PX547/LX200>

Rated voltage
AC-207E: AC230V
AC-207K: AC240V

Rated output
DC2V 350mA

<PX447/PX347>

Maximum output
15mW + 15mW (EIAJ 16 Ω)

Power source
DC3V: Dry cell battery R03 (size: AAA) $\times$ 2
Household AC power (Using an optional AC adaptor):
Aiwa AC-300 (PX447)
Aiwa AC-300 or AC-620 (PX347)

Battery life (EIAJ, 1mW output)
manganese batteries (R03 (size AAA) $\times$ 2): approx. 3 hours
alkaline batteries (R03 (size AAA) $\times$ 2): approx. 9 hours

Dimension
109 (W) $\times$ 78.7 (H) $\times$ 25.1 (D) mm (4 3/8 $\times$ 3 1/8 $\times$ 1 in.)

Weight
154g (5.4oz) incl. the dry cell batteries

- Design and specifications are subject to change without notice.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol $\square\square$ are trademarks of Dolby Laboratories Licensing Corporation.
- The word "BBE" and the "BBE symbol" are trademarks of BBE Sound, Inc. Under license from BBE Sound, Inc.

MANUAL
SERVICE

Precautions During Servicing

When the unit is serviced with the MAIN C.B removed, it is not possible to check operation of the unit because the soldered terminals of the motors, etc. are detached.

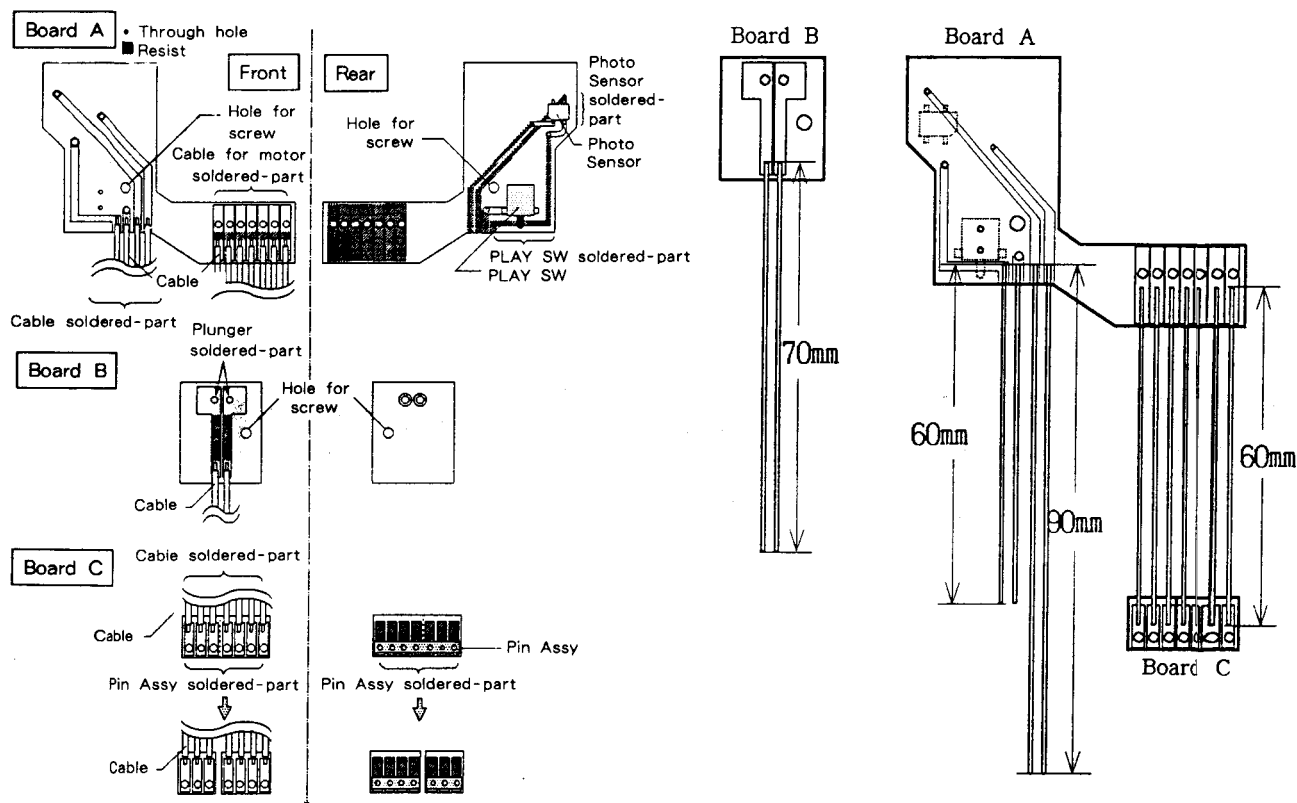
Use the jig kit (for 4ZM-1) to check the operations of the unit while the MAIN C.B is removed.

Parts name : 4ZM-1 Jig Kit Parts number : 09-001-323-010

1) Assembling the Jig Kit

Assemble the jig kit as follows :

- ① Cut a 6-pin flat cable into three 2-pin cables.
- ② Solder C-SW, PUSH and P-SNSR to board A.
- ③ Solder a 7-pin flat cable and the two 2-pin cables to board A.
- ④ Solder the 2-pin cable to board B.
- ⑤ Attach the Pin Assy to board C and solder it on one end of the 7-pin flat cable.



Details of Jig Kit and Assembly Procedure

Assembled Jig Kit

2) Attaching the Jig Kit

Board A

- Attach board A to the mechanism with the MAIN C.B fixing screw.
- Solder the motor terminals.
- Solder cables A and B to the photo sensor.
- Solder cables C and D to the PLAY SW.

Board B

- Attach board B to the mechanism with the MAIN C.B fixing screw.
- Solder the plunger terminal.
- Solder cables E and F to the rounds of the plunger on the MAIN C.B.

Board C

- Solder the Pin Assy on board C to the rounds of the motor on the MAIN C.B.

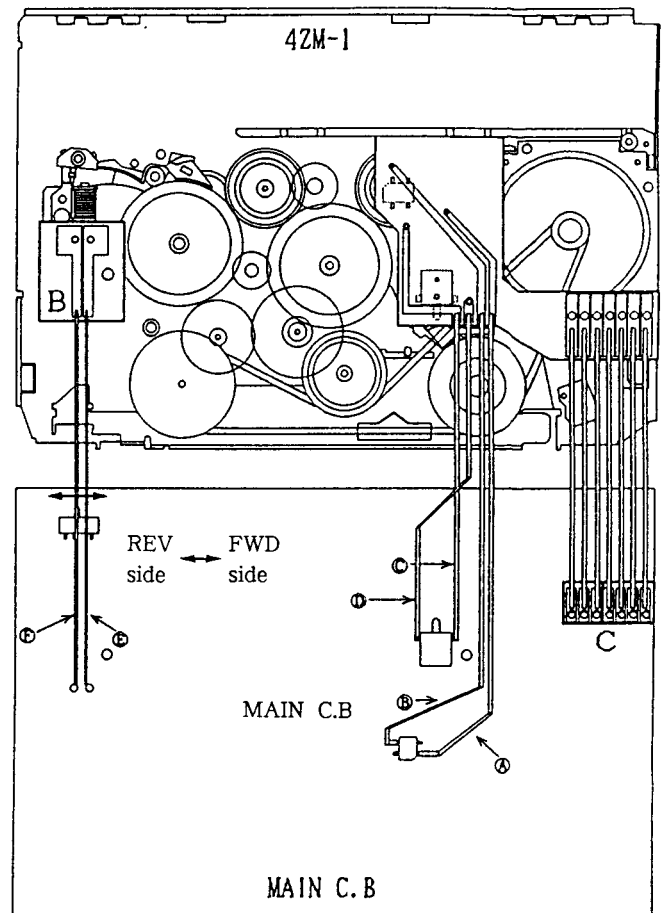
3) How to Use the Jig Kit

When the MAIN C.B is opened, the switches on the C.B are on the back side. To facilitate operations, use the remote controller.

- ① Connect the remote controller to the unit.
- ② Turn on the remote switch.
- ③ Short the C-SW terminal.
- ④ Set the F/R switch depending on the tape running direction.

4) Note

Wiring between the boards and the MAIN C.B differs with the units.
Refer to the service manual of the unit.



ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は“REFERENCE NAME LIST”を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

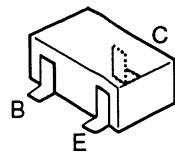
REF. NO	PART NO.	カナ NO.	DESCRIPTION	REF. NO	PART NO.	カナ NO.	DESCRIPTION
IC				C41	87-010-196-089		C-CAP, S 0.1-25 F
	87-002-423-089		IC, TA2002 FN(ER)	C42	87-010-196-089		C-CAP, S 0.1-25 F
	87-001-875-089		IC, BA1106 FS	C43	87-010-942-089		C-CAP, E 47-4
	87-017-775-080		IC, TB2003-008FN	C50	87-016-296-089		C-CAP, TN 22-4 SV(A) (EXCEPT 347)
	87-002-406-080		IC, TPIC326ADB	C51	87-010-452-089		C-CAP, 1-16 F
	87-017-826-080		IC, MM1085AFFE (547, 200)	C52	87-010-452-089		C-CAP, 1-16 F
	87-017-906-080		IC, MM1206AFFE (447, 347)	C53	87-010-452-089		C-CAP, 1-16 F
TRANSISTOR				C54	87-010-452-089		C-CAP, 1-16 F
	87-026-264-089		C-TR, RN1411	C55	87-010-184-089		C-CAP, S 3300P-50 B (EXCEPT 347)
	89-327-125-089		C-TR, 2SC2712GR	C56	87-010-184-089		C-CAP, S 3300P-50 B (EXCEPT 347)
	87-026-263-089		C-TR, RN1410	C57	87-010-196-089		C-CAP, S 0.1-25 F (EXCEPT 347)
	89-115-884-089		C-TR, 2SA1588Y	C57	87-012-141-089		C-CAP, S 0.22-16 F (347)
	87-026-262-089		C-TR, RN1407	C58	87-010-196-089		C-CAP, S 0.1-25 F (EXCEPT 347)
	89-508-804-089		C-FET, 2SK880 Y	C58	87-012-141-089		C-CAP, S 0.22-16 F (347)
	89-333-266-089		C-TR, 2SC3326B	C59	87-010-195-089		C-CAP, S 0.068-25 F (EXCEPT 347)
	89-113-625-089		C-TR, 2SA1362GR (TAPG)	C60	87-010-195-089		C-CAP, S 0.068-25 F (EXCEPT 347)
	87-026-581-089		C-TR, RN2405	C61	87-010-188-089		C-CAP, S 6800P-50 B (EXCEPT 347)
	87-026-467-089		C-TR, HN1C01F (GR)	C62	87-010-188-089		C-CAP, S 6800P-50 B (EXCEPT 347)
	87-026-567-080		C-TR, RN1611 (447, 347)	C63	87-010-452-089		C-CAP, 1-16 F
	87-026-470-089		C-TR, HN1C03FB	C64	87-010-452-089		C-CAP, 1-16 F
DIODE				C65	87-010-189-089		C-CAP, S 8200P-50 B (EXCEPT 347)
	87-020-027-089		C-DIODE, 1SS184 (EXCEPT 347)	C66	87-010-189-089		C-CAP, S 8200P-50 B (EXCEPT 347)
	87-001-165-089		C-DIODE, 1SS300	C70	87-010-452-089		C-CAP, 1-16 F
MAIN C. B				C71	87-015-621-089		C-CAP, TN 2.2-6.3
C1	87-010-172-089		C-CAP, S 330P-50 CH	C72	87-010-971-089		C-CAP, S 4700P-50 B J
C2	87-010-172-089		C-CAP, S 330P-50 CH	C73	87-015-923-089		C-CAP, TN 0.22-35
C3	87-010-172-089		C-CAP, S 330P-50 CH	C74	87-010-805-089		C-CAP, S 1-16F
C4	87-010-172-089		C-CAP, S 330P-50 CH	C80	87-015-923-089		C-CAP, TN 0.22-35
C5	87-016-296-089		C-CAP, TN 22-4 SV(A)	C81	87-010-196-089		C-CAP, S 0.1-25 F
C6	87-016-296-089		C-CAP, TN 22-4 SV(A)	C82	87-010-194-089		C-CAP, S 0.047-25 F
C7	87-010-958-089		C-CAP, S 0.01-25 B J	C83	87-010-196-089		C-CAP, S 0.1-25 F
C8	87-010-958-089		C-CAP, S 0.01-25 B J	C84	87-010-805-089		C-CAP, S 1-16 F
C9	87-010-198-089		C-CAP, S 0.022-25 B	C85	87-012-141-089		C-CAP, S 0.22-16 F
C10	87-010-198-089		C-CAP, S 0.022-25 B	C86	87-015-932-089		C-CAP, TN 0.47-20
C11	87-010-424-089		C-CAP, TN 4.7-4	C87	87-012-358-089		C-CAP, S 0.47-10FZ
C12	87-016-296-089		C-CAP, TN 22-4 SV(A)	C88	87-010-186-089		C-CAP, S 4700P-50 B
C13	87-010-853-089		C-CAP, E 220-4 H5.5	C89	87-010-805-089		C-CAP, S 1-16F (EXCEPT 347)
C14	87-010-452-089		C-CAP, 1-16 F	J1	87-099-495-019		JACK, 3.5 BLK (L)N4
C15	87-010-853-089		C-CAP, E 220-4 H5.5	J2	87-099-577-019		JACK, DC 3.75
C16	87-010-853-089		C-CAP, E 220-4 H5.5	LED1	87-017-828-080		C-LED, SEC1401C GRN
C17	87-010-196-089		C-CAP, S 0.1-25 F	LED2	87-017-829-080		C-LED, SEC190K ORN
C18	87-010-196-089		C-CAP, S 0.1-25 F	LED3	87-017-827-080		C-LED, SEC1201C RED
C19	87-016-296-089		C-CAP, TN 22-4 SV(A)	R1	87-022-343-089		C-RES, S 820-1/10W F
C20	87-010-196-089		C-CAP, S 0.1-25 F	R2	87-022-343-089		C-RES, S 820-1/10W F
C21	87-012-140-089		C-CAP, S 470P-50 CH	R3	87-022-344-089		C-RES, S 1K-1/10W F
C22	87-010-196-089		C-CAP, S 0.1-25 F	R4	87-022-344-089		C-RES, S 1K-1/10W F
C23	87-010-195-089		C-CAP, S 0.068-25 F	R7	87-022-371-089		C-RES, S 330K-1/10W F
C24	87-016-296-089		C-CAP, TN 22-4 SV(A)	R8	87-022-371-089		C-RES, S 330K-1/10W F
C25	87-010-853-089		C-CAP, E 220-4 H5.5	R9	87-022-357-089		C-RES, S 15K-1/10W F
C26	87-010-196-089		C-CAP, S 0.1-25 F (447, 347)	R10	87-022-357-089		C-RES, S 15K-1/10W F
C27	87-010-196-089		C-CAP, S 0.1-25 F	R93	87-022-366-089		C-RES, S 120K-1/10W F
C28	87-010-196-089		C-CAP, S 0.1-25 F (547, 200)	R94	87-022-372-089		C-RES, S 390K-1/10W F
C31	87-010-452-089		C-CAP, 1-16 F	R130	87-022-222-089		C-RES, S 2.2-1/10W F
C32	87-010-452-089		C-CAP, 1-16 F	S1	84-HK3-604-010		SW, LEAF 42M-1P
C33	87-010-193-089		C-CAP, S 0.033-25 F	S2	87-036-304-089		C-SW, SL 1-1-2
C34	87-010-193-089		C-CAP, S 0.033-25 F	S3	87-036-304-089		C-SW, SL 1-1-2 (347)
C35	87-010-186-089		C-CAP, S 4700P-50 B	S3	87-036-146-089		C-SW, SL 1-1-4 (EXCEPT 347)
C36	87-010-186-089		C-CAP, S 4700P-50 B	S4	87-036-145-089		C-SW, SL 1-1-3 (547, 200)
C37	87-010-197-089		C-CAP, S 0.01-25 B	S4	87-036-275-089		C-SW, SL 1-1-3 (447, 347)
C38	87-010-197-089		C-CAP, S 0.01-25 B	S5	87-036-237-089		C-SW, PUSH
C39	87-010-193-089		C-CAP, S 0.033-25 F	S6	87-036-236-089		C-SW, SL 1-1-2 (NC)
C40	87-010-193-089		C-CAP, S 0.033-25 F	S7	87-036-253-089		C-SW, TACT (547, 200)
				S7	87-036-367-089		C-SW, TACT PT-030-A (447, 347)
				S8	87-036-253-089		C-SW, TACT (547, 200)
				S8	87-036-367-089		C-SW, TACT PT-030-A (447, 347)
				S9	87-036-253-089		C-SW, TACT (547, 200)
				S9	87-036-367-089		C-SW, TACT PT-030-A (447, 347)
				S10	87-036-253-089		C-SW, TACT (547, 200)
				S10	87-036-367-089		C-SW, TACT PT-030-A (447, 347)
				S11	87-036-253-089		C-SW, TACT (547, 200)

REF. NO	PART NO.	カソリ NO.	DESCRIPTION
S11	87-036-367-089		C-SW, TACT PT-030-A(447, 347)
SFR1	87-024-405-089		C-SFR, 4.7K RH03A3A
SNR1	87-017-793-080		P-SNSR, GP2L27
TH1	87-026-615-089		C-THMS, SN20-3E331KT
TM1	84-HK3-603-010		TERM ASSY PB-4S(EXCEPT 347)
VR1	87-024-640-089		C-VR, 20KCX2 DIA14

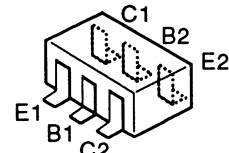
HEAD FLEX. C. B

MOTOR GOV. C. B

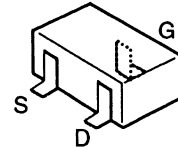
TRANSISTOR ILLUSTRATION



2SA1362
2SA1588
2SC2712
2SC3326
RN1407
RN1410
RN1411
RN2405



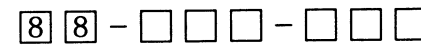
RN1611
HN1C01F
HN1C03F



2SK880

チップ抵抗部品コード/CHIP. RESISTOR PART CODE

チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding

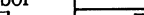


A
抵抗部品コード
Resistor Code

桁表示
Figure

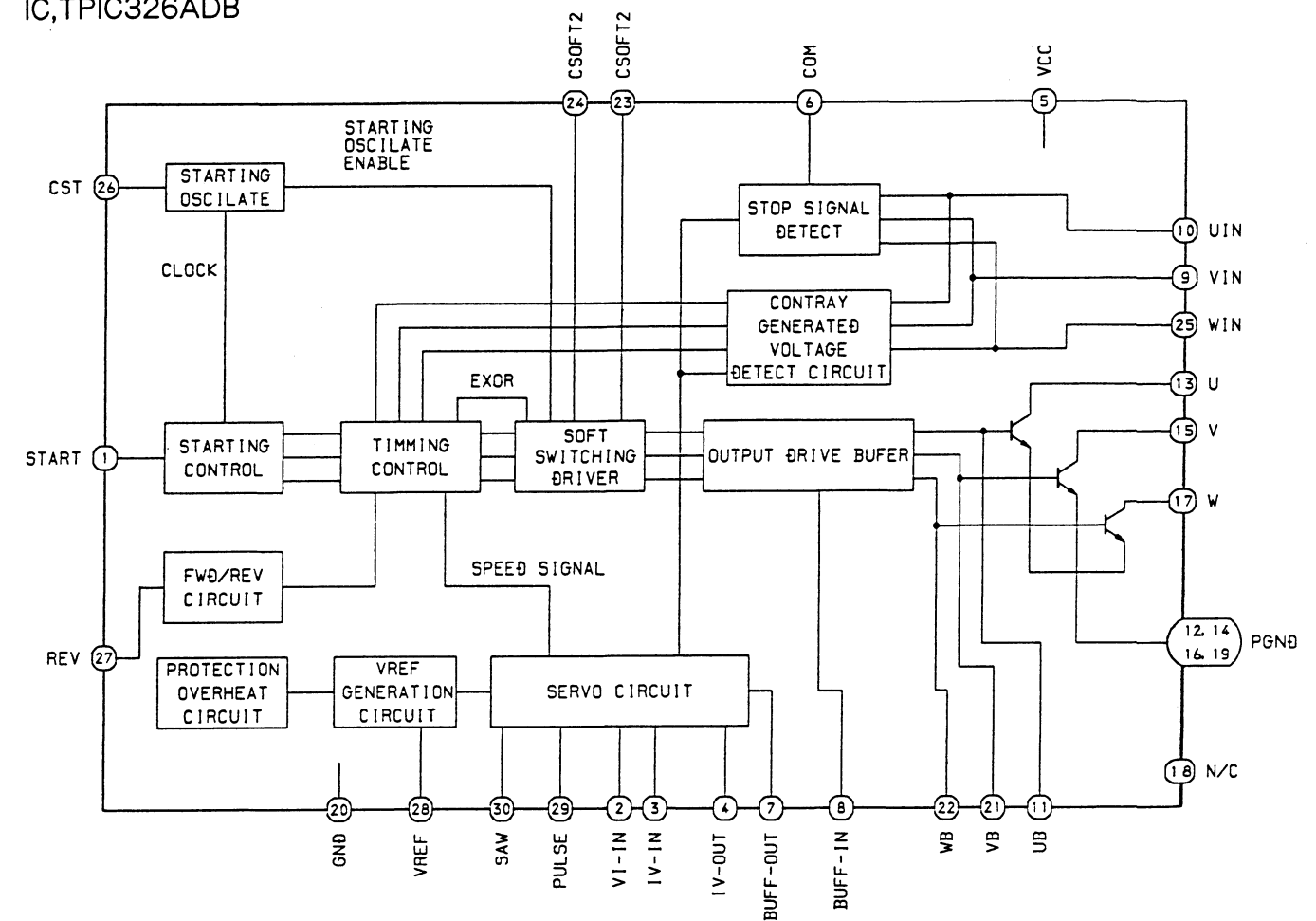
抵抗値
Value of resistor

チップ抵抗
Chip resistor

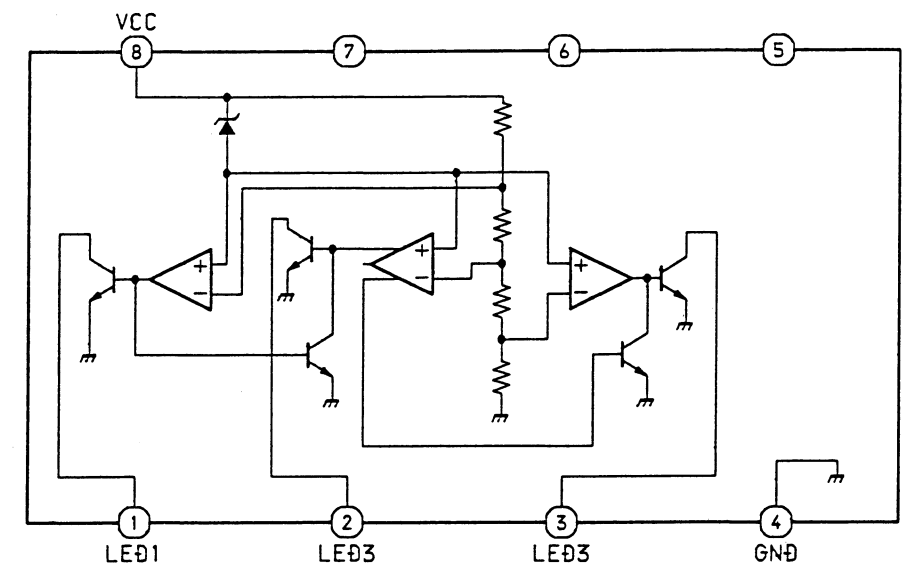
Chip resistor				Dimensions/寸法 (mm)				Resistor Code : A 抵抗コード : A
Wattage 容量	Type 種類	Tolerance 許容誤差	Symbol 記号	Form/外形	L	W	t	
1/32W	1608	± 5 %	C1		1.6	0.8	0.35	108
1/10W	2125	± 5 %	C1		2	1.25	1.45	118
1/8W	3126	± 5 %	C1		3.2	1.6	0.5 ~0.7	128

IC BLOCK DIAGRAM

IC,TPIC326ADB

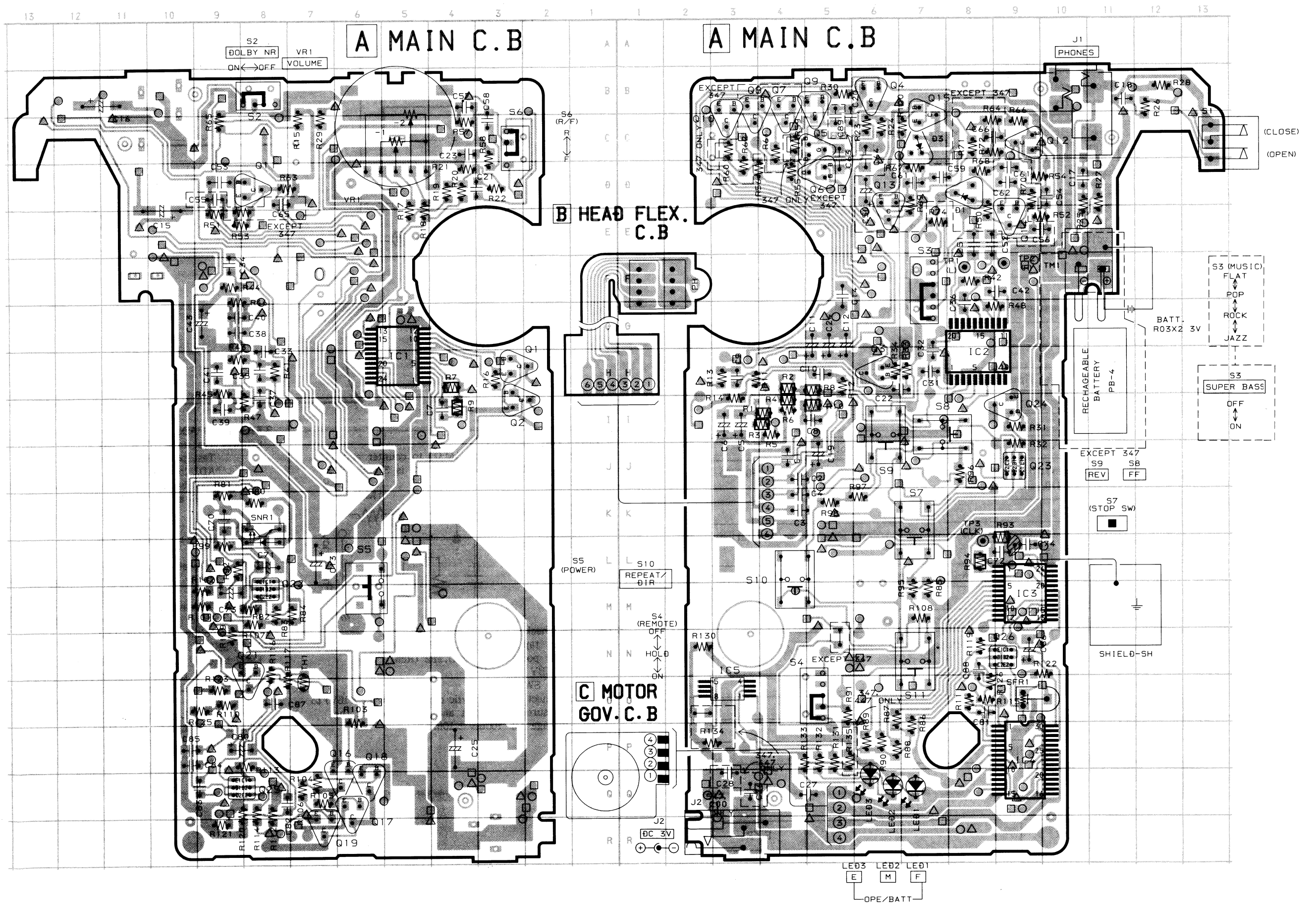


IC,MM1085



B
HEAD FLEX C.B





IC DESCRIPTION

IC,TB2003 – 008 – FN

Pin No.	Pin Name	I/O	Description
1	GND	—	Connected to GND.
2	OSC	—	For generating the system clock: reference frequency oscillated by the externally connected C and R. $f_{osc} = 3.2 \text{ kHz}$
3	$\overline{CL}$	I	The "L" level input resets the internal circuits. All the output terminals turn off the output transistors and system clock stops. The "H" level input outputs signals and the program starts from ROM address "0".
4	SP-COMP	I	Two-wire remote control input pin. Connected to the input of the internal operation amplifier, and detects 5 levels by comparing with the reference voltage.
5	T3	—	Not used.
6	T2	—	Not used.
7	T1	—	Not used.
8	R-REC	—	Not used.
9	MS. BS IN	—	Not used.
10	C-SW	I	The "L" level signal sets the cassette execution command to standby mode.
11	TU-IN	—	Note used.
12	AUTO	I	The AC input sets the timer 2 seconds.
13	P-SW	I	"L" level when PLAY and REC, and "H" level in the other modes.
14	F/R	I	The mask switch which is "L" level when REVERSE and "H" level when FORWARD switches I/O, and F/R display.
15	REV MODE	I	Not used.
16	DIR	O	The "H" level does not allow to record in FORWARD mode. The motor rotating direction is reversed.
17	BRK	O	Open collector output/BRK ON-OFF SW output. "L" when the motor is rotating.
18	M-HI	—	Not used.
19	M-LOW	O	Open collector output which switches the motor ON and OFF.
20	MUTE	O	Emitter follower output, which is the mute signal. "H" level output while the mechanism is operating.
21	REC PL	—	Not used.
22	PLAY MD	O	"H" level output which drives the MD plunger during playing.
23	ALARM	O	Pulse-like ALARM output when each function is operating.
24	VCC	—	2 V DC power supply pin.

IC,TB2003 – 008 – FN KEY MATRIX

	F/R		F/R
FWD STOP	H	REV STOP	L
FWD PLAY	H	REV PLAY	L
FWD FF	H	REV FF	L
FWD REW	H	REV REW	L

ADJUSTMENT

A MAIN C.B

TP2 (R)
TP1 (L)
TP3 (CLK)
SFR1

1.Clock Frequency Check
Settings : Test point : TP3
Method : Connect a resistor (1M Ω) to counter and TP3.
Check the Frequency at TP3 is 3200Hz $\pm \frac{20}{100}$ Hz

IC,TB2003 - 008
1M Ω
TP3
Frequency Counter

3.Tape speed ADJ.
Settings :Test tape : TTA – 100
Test point : Phones jack (J1)
ADJ. location : SFR1
Method :Play back the test tape, adjust for 3000Hz at FWD and ± 45 Hz at REV.

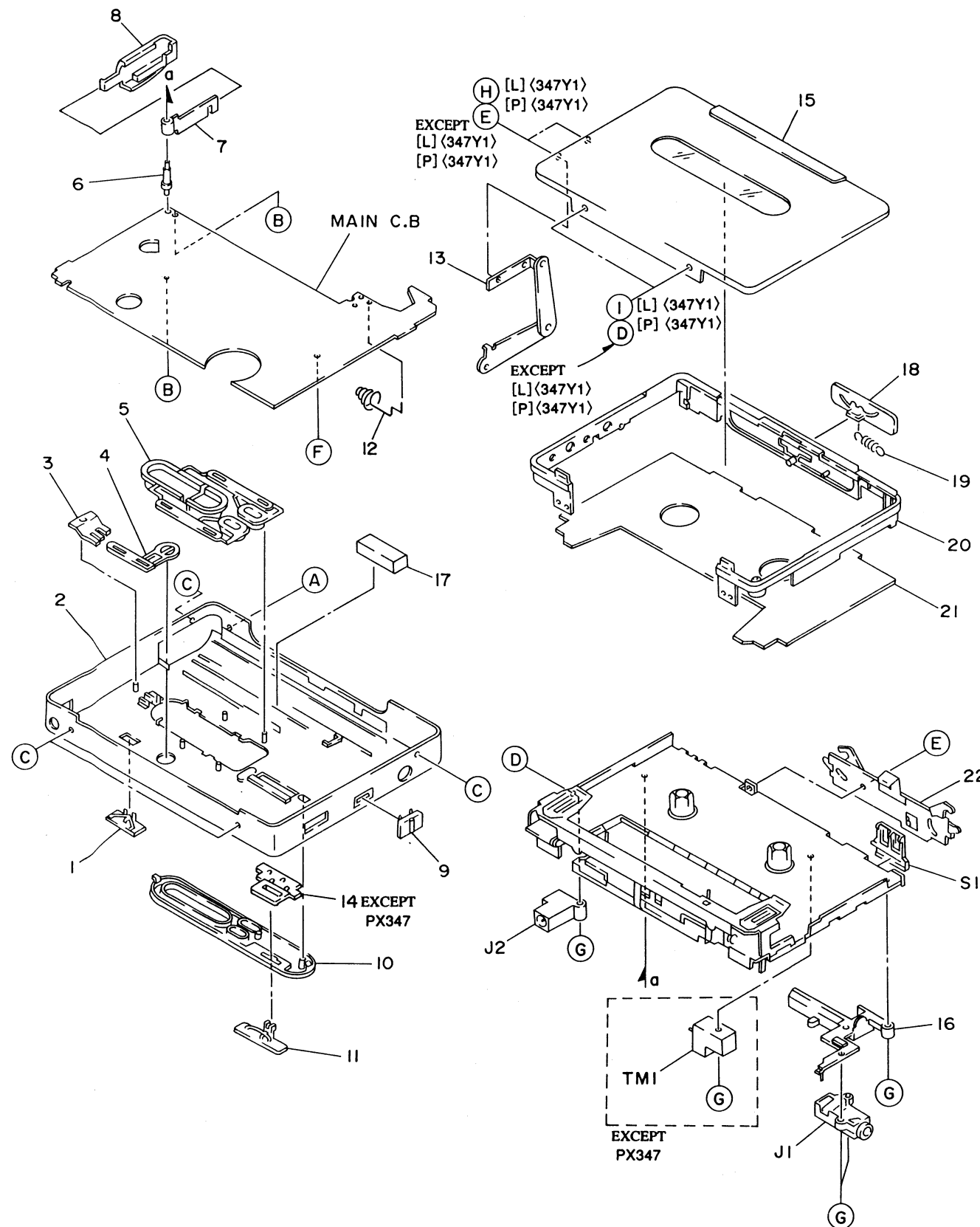
2.Dolby level check
Settings :Test tape : TTS – 200 (TTA – 161,TCC – 130)
Test point : TP1 (Lch),TP2 (Rch)
DOLBY SW : OFF
DSL SW : OFF
Method : Connect an electrolytic capacitor (10 μ F/16V) to measured equipment and TP1 (6),check the voltage for 100mV $\pm$ 10mV.

4.Azimuth ADJ.
This model is no azimuth ADJ.

5.BATT light level indication check
Settings :Suply power to a charging battery terminal ASSY from a regulator power supply.
Method :Decrease the output voltage of a regulated power supply for less 2V and check that it's voltage of below light.

<PX547, LX200>
1.95V $\pm$ 0.04V Light off F (Full) LED
1.85V $\pm$ 0.04V Light off M (Mid) LED
1.80V $\pm$ 0.04V Light off E (Emp) LED
<PX447, PX347>
2.45V $\pm$ 0.04V Light off F (Full) LED
2.30V $\pm$ 0.04V Light off M (Mid) LED
2.10V $\pm$ 0.04V Light off E (Emp) LED

MECHANICAL EXPLODED VIEW 1/1

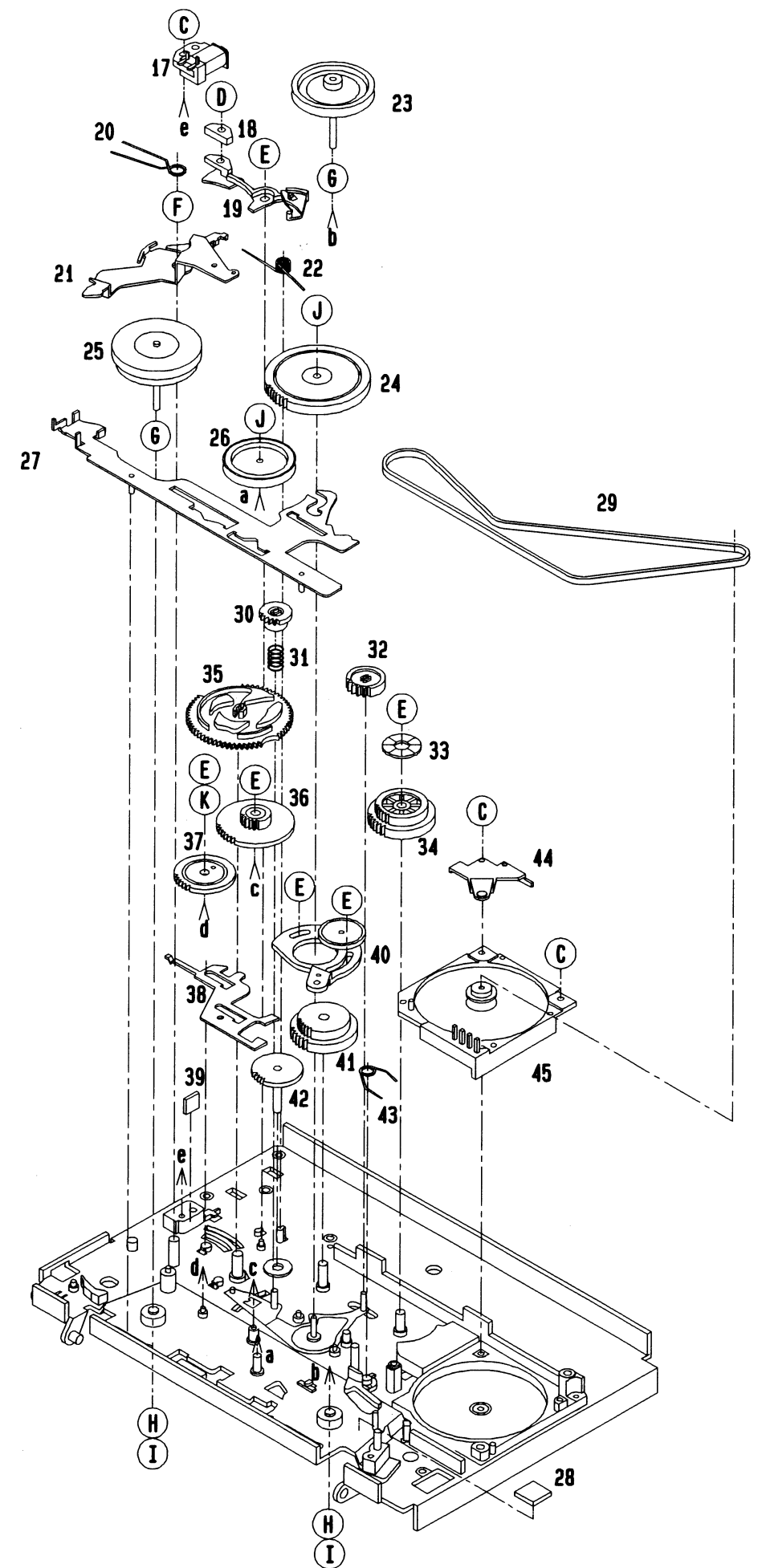
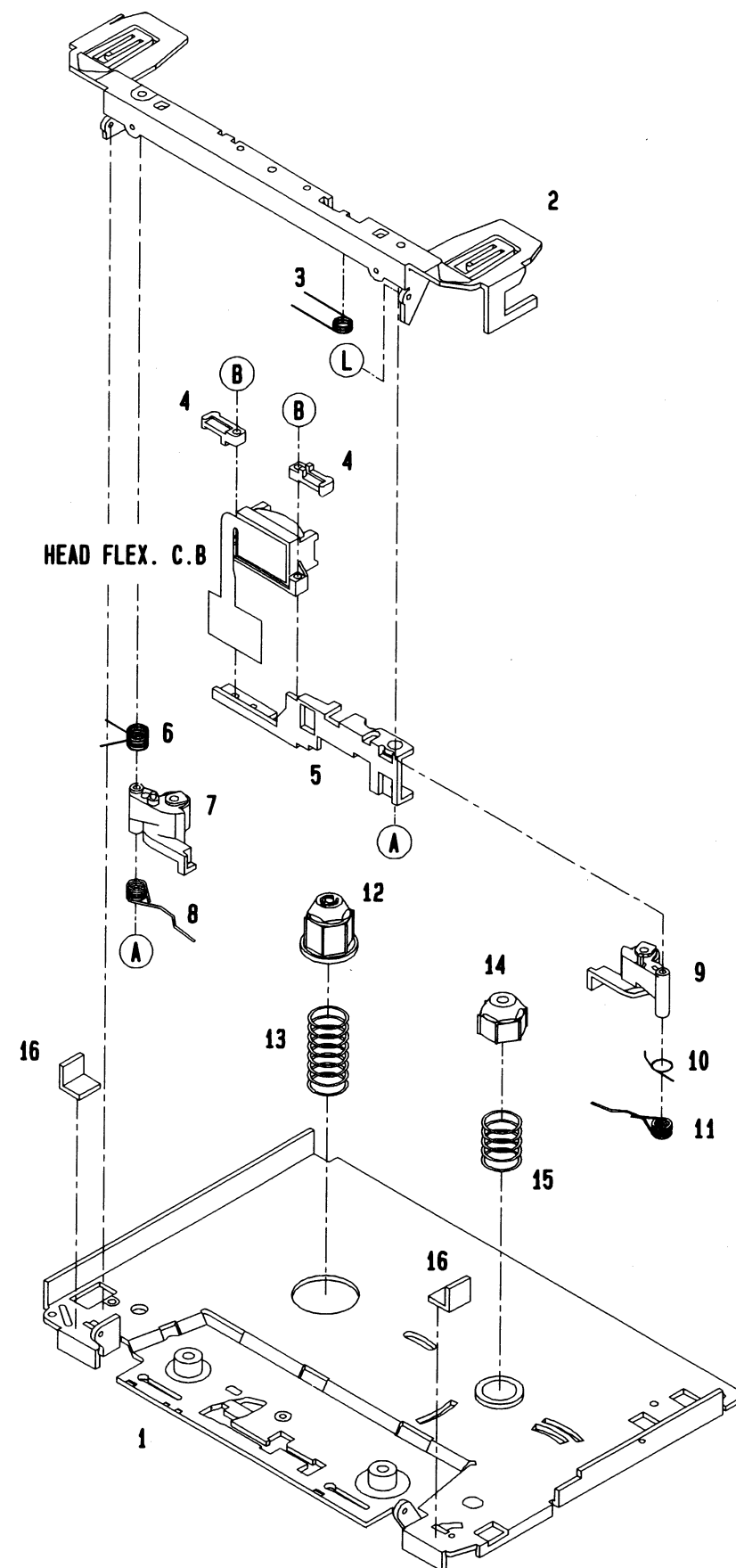


MECHANICAL PARTS LIST 1/1

DESCRIPTIONで判断できない物は“REFERENCE NAME LIST”を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	DESCRIPTION	REF. NO	PART NO.	DESCRIPTION
1	84-HK6-011-019	KNOB, SL H <EXCEPT PX347>	14	84-HK6-013-019	PLATE, IND <PX547, PX447, LX200>
1	84-HKC-012-019	KNOB, SL H <PX347>	15	09-028-133-010	LID, CASS ASSY [H] <PX547>
2	84-HK6-003-019	CAB, REAR [H] <PX547>	15	09-028-146-010	LID, CASS ASSY [R] <PX547>
2	84-HK6-019-019	CAB, REAR [H] <PX447>	15	09-028-134-010	LID, CASS ASSY [G] <PX547>
2	84-HKC-003-019	CAB, REAR [B] <PX347>	15	09-028-135-010	LID, CASS ASSY [H] <PX447>
2	84-HK6-033-019	CAB, REAR [G] <LX200>	15	09-028-147-010	LID, CASS ASSY [R] <LX200>
2	84-HK6-025-019	CAB, REAR [G] <PX547>	15	09-028-148-010	LID, CASS ASSY [G] <LX200>
2	84-HKC-013-019	CAB, REAR [L] <PX347>	15	09-028-136-010	LID, CASS ASSY [B] <PX347>
2	84-HKC-014-019	CAB, REAR [P] <PX347>	15	09-028-137-010	LID, CASS ASSY [L] <PX347>
2	84-HK6-038-019	CAB, REAR [R] <PX547>	15	09-028-138-010	LID, CASS ASSY [P] <PX347>
2	84-HK6-030-019	CAB, REAR [R] <LX200>	16	84-HK6-203-019	HLDR, CONT
3	84-HK6-017-019	LENS, LED	17	84-HK6-208-019	CUSH, BAT
4	84-HK6-018-019	KEY, REPLAY	18	84-HK3-011-010	KNOB, SL OPEN
5	84-HK6-008-019	KEY, CONT [H, R, L, P]	19	84-HK3-214-010	E-SP, LOCK
5	84-HKC-009-019	KEY, CONT [G, B]	20	84-HK6-004-019	FRAME [H, R, L, P]
6	84-HK6-204-010	SHAFT, BAT	20	84-HKC-008-019	FRAME [G, B]
7	84-HK6-201-010	BAT, CONT P	21	84-HK6-016-010	PANEL, CHAS <PX547>
8	84-HK6-007-019	LID, BAT [H]	21	84-HK6-034-010	PANEL, CHAS <LX200>
8	84-HKC-007-019	LID, BAT [B]	21	84-HK6-020-010	PANEL, CHAS <PX447>
8	84-HK6-026-019	LID, BAT [G]	21	84-HKC-004-010	PANEL, CHAS <PX347>
8	84-HKC-020-019	LID, BAT [L]	22	84-HK3-206-010	T-LOCK ASSY
8	84-HKC-021-019	LID, BAT [P]	A	87-067-360-019	S-SCRW, +1. 4-3. 5(BLK)
8	84-HK6-035-019	LID, BAT [R]	B	87-067-385-019	SCREW VT 1. 4X2. 5 HL
9	84-HKC-023-019	KNOB, SL D [L, P] <PX347>	C	87-067-511-019	S-SCRW, +1. 4-2(BLK)
9	84-HK6-010-019	KNOB, SL D<EXCEPT [L, P]PX347>	D	87-067-807-019	S-SCRW +1. 4-0. 7
10	84-HKC-005-019	PANEL, CAB [B]	E	87-067-734-019	S-SCRW, 1. 4-1. 4 BLK N
10	84-HK6-005-019	PANEL, CAB [H, R]	F	87-067-746-019	SCREW-SERR M1. 4-2
10	84-HK7-015-019	PANEL, CAB [G]	G	87-262-509-319	V+1. 4-4 BLK
10	84-HKC-019-019	PANEL, CAB [L, P]	H	87-067-735-019	S-SCRW, 1. 4-1. 4 CR N [L, P] <PX347>
11	84-HK6-009-019	KNOB, SL MSP [H, R]	I	87-078-102-019	S-SCRW, 1. 4-0. 7 CR N [L, P] <PX347>
11	84-HK7-014-019	KNOB, SL MSP [G]			
11	84-HKC-006-019	KNOB, SL SB [B]			
11	84-HKC-022-019	KNOB, SL SB [L, P]			
12	84-HK6-202-019	BAT, CONT M			
13	84-HK6-210-010	HINGE, CASS ASSY			

TAPE MECHANISM EXPLODED VIEW 1/1

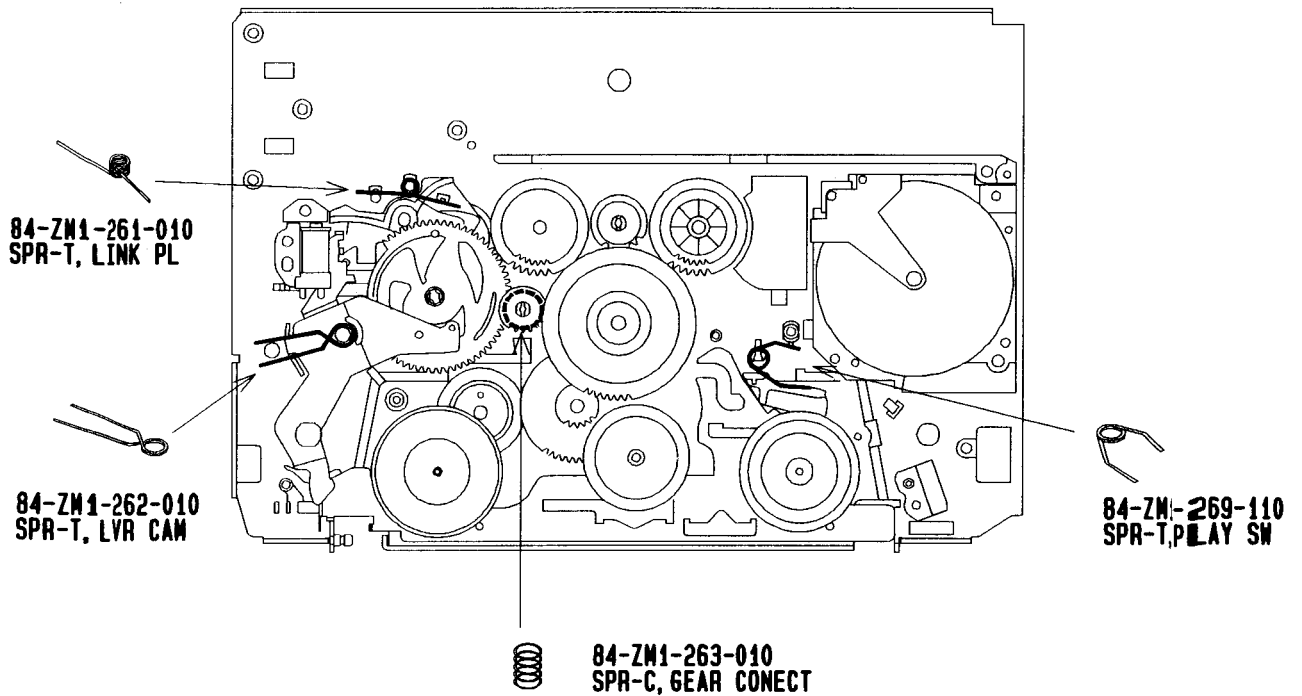
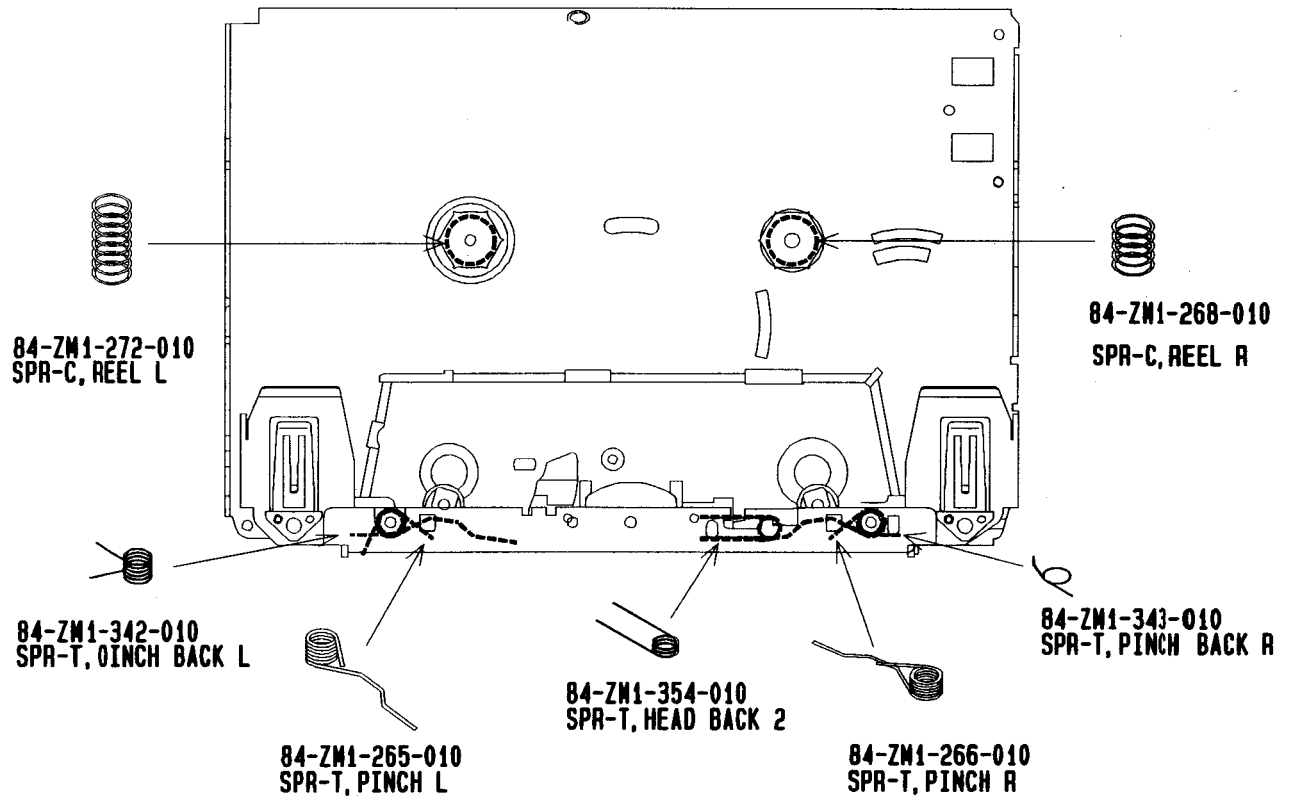


TAPE MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は“REFERENCE NAME LIST”を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カンリ NO.	DESCRIPTION	REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	84-ZM1-201-010		OUT-SERT ASSY	31	84-ZM1-263-010		SPR-C, GEAR CONECT
2	84-ZM1-212-010		HOLDER CASSET ASSY P	32	84-ZM1-225-010		GEAR FR
3	84-ZM1-354-010		SPR-T, HEAD BACK 2	33	84-ZM1-271-010		SH AUTO
4	84-ZM1-259-010		ARM, STOP	34	84-ZM1-240-010		GEAR IDLE B
5	84-ZM1-216-010		ARM HEAD	35	84-ZM1-221-010		GEAR CAM
6	84-ZM1-342-010		SPR-T PINCH BACK L	36	84-ZM1-223-210		GEAR LINK B
7	84-ZM1-258-010		ARM ASSY, PINCH L2	37	84-ZM1-222-010		GEAR LINK A
8	84-ZM1-265-010		SPR-T, PINCH L	38	84-ZM1-217-010		L, FR LOCK
9	84-ZM1-256-010		ARM ASSY, PINCH R2	39	87-078-119-010		SH, 2.5-2.5-0.55
10	84-ZM1-343-010		SPR-T PINCH BACK R	40	84-ZM1-210-010		LVR ASSY, T-UP
11	84-ZM1-266-010		SPR-T, PINCH R	41	84-ZM1-224-010		GEAR IDLE A
12	84-ZM1-227-110		GEAR REEL L	42	84-ZM1-228-010		GEAR REEL R
13	84-ZM1-272-010		SPR-C, REEL L	43	84-ZM1-269-110		SPR-T PLAY SW
14	84-ZM1-220-110		REEL CAP, R	44	84-ZM1-379-010		SPR-P, MOT
15	84-ZM1-268-010		SPR-C, REEL R	45	84-ZM1-358-510		MOT, ASSY 4P(A)
16	84-ZM1-349-010		TAPE GUIDE STOPPER	A	87-067-569-010		PW0.83-2.5-0.25
17	84-ZM1-601-010		SOL, MD	B	87-078-099-010		S-SCRW, V+1.4-6(3)
18	84-ZM1-602-010		CHIP, SOL	C	87-067-384-010		VT1.4-3.5HL
19	84-ZM1-219-010		LINK PL	D	87-067-367-010		PW, 0.95-2.6-0.25
20	84-ZM1-262-010		SPR-T, LVR CAM	E	87-067-860-010		PW, 3-0.95-0.4
21	84-ZM1-204-010		LVR ASSY, CAM	F	87-078-018-010		PW, 1.55-3.5-0.25
22	84-ZM1-261-010		SPR-T, LINK PL	G	87-078-071-110		SW, 1.2-3-0.25
23	84-ZM1-350-010		FW ASSY L 2	H	87-078-101-010		RW, 1.21-2.4-0.25
24	84-ZM1-231-210		SLIP ASSY	I	87-078-065-010		SH, 0.9-2.25-0.25
25	84-ZM1-238-010		FW ASSY R	J	87-067-693-010		PW, 3-0.8-0.25
26	84-ZM1-280-010		PULLY PM	K	87-078-115-010		SH, 1.91-2.9-0.05
27	84-ZM1-208-010		LVR ASSY HEAD	L	87-078-087-010		PW, 1-3-0.4
28	87-078-118-010		SH, 3.7-3.7-1.05				
29	84-ZM1-218-010		BELT				
30	84-ZM1-226-010		GEAR CAM C				

SPRING APPLICATION POSITION



■ ACCESSORIES/PACKAGE LIST

DESCRIPTIONで判断できない物は“REFERENCE NAME LIST”を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カリ NO.	DESCRIPTION
1	84-HK6-905-019		IB, EX (547, 447, 200)
1	84-HKC-901-019		IB, Y (347)
2	82-HK3-951-010		CARRYING CAGE (200)
3	87-042-176-019		AC-207E2 (C) (AE)
3	87-042-177-019		AC-207K (C) (AK)
4	87-047-151-010		PB-4S NAY (R) (547, 200)
5	87-048-278-019		HP-24NA (347)
5	87-048-290-019		HP-R402NA (547, 447)
5	87-048-297-019		HP-R402NA (G) (200)
5	87-048-298-019		HP-R402NA (R) (200)

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER
サージサプレッサ	SERGESUPPRESSOR
セラコン	CAP,CERA

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL
ジグアーム	ARM,SHAFT
ジグガイド	GUIDE,SHAFT
ストラップ	STRAP
トクナベ	S-SCRW
ヒンジ	HINGE
ヒンジビス	S-SCRW
ビスセレート	SCRW,SERRART

サービス技術ニュース	
番 号	連絡内容
G — —	
G — —	
G — —	

アイワ株式会社
AIWA CO.,LTD.

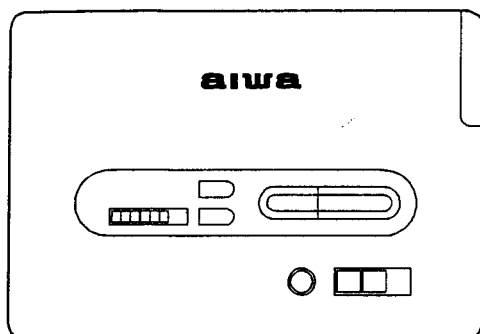
92 1502 750038

Tokyo Japan

aiwa



HS-PX547 HS-PX447 HS-PX347 HS-LX200



STEREO CASSETTE PLAYER

• BASIC TAPE MECHANISM: 4ZM-1 P1N

• TYPE: AE.AK.Y(547) Y(447)
YK.Y.YU(347) AE.AK(200)

SPECIFICATIONS

〈PX547/LX200〉

Maximum output
15mW + 15mW (EIAJ 16 Ω)

Power source
DC 3V: Dry cell battery R03 (size: AAA) $\times$ 2
DC 2V: Rechargeable battery PB - 4S
Household AC power: Using the supplied AC adaptor

Battery life (EIAJ, 1mW output)
Using the rechargeable battery PB - 4S
approx: 2hours (10minutes recharging)
6hours (60minutes recharging)
7hours (4hours recharging)

Dimensions
109 (W) $\times$ 78.7 (H) $\times$ 25.1 (D) mm (4 3/8 $\times$ 3 1/8 $\times$ 1 in.)

Weight
172g (6oz) incl. the rechargeable battery

AC adaptor AC - 207

〈Supplied for PX547/LX200〉

Rated voltage
AC - 207E: AC230V
AC - 207K: AC240V

Rated output
DC2V 350mA

〈PX447/PX347〉

Maximum output
15mW + 15mW (EIAJ 16 Ω)

Power source
DC3V: Dry cell battery R03 (size: AAA) $\times$ 2
Household AC power (Using an optional AC adaptor):
Aiwa AC - 300 (PX447)
Aiwa AC - 300 or AC - 620 (PX347)

Battery life (EIAJ, 1mW output)
manganese batteries (R03 (size AAA) $\times$ 2): approx. 3 hours
alkaline batteries (R03 (size AAA) $\times$ 2): approx. 9 hours

Dimension
109 (W) $\times$ 78.7 (H) $\times$ 25.1 (D) mm (4 3/8 $\times$ 3 1/8 $\times$ 1 in.)

Weight
154g (5.4oz) incl. the dry cell batteries

- Design and specifications are subject to change without notice.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol $\square\square$ are trademarks of Dolby Laboratories Licensing Corporation.
- The word "BBE" and the "BBE symbol" are trademarks of BBE Sound, Inc.
Under license from BBE Sound, Inc.

MANUAL
SERVICE

Precautions During Servicing

When the unit is serviced with the MAIN C.B removed, it is not possible to check operation of the unit because the soldered terminals of the motors, etc. are detached.

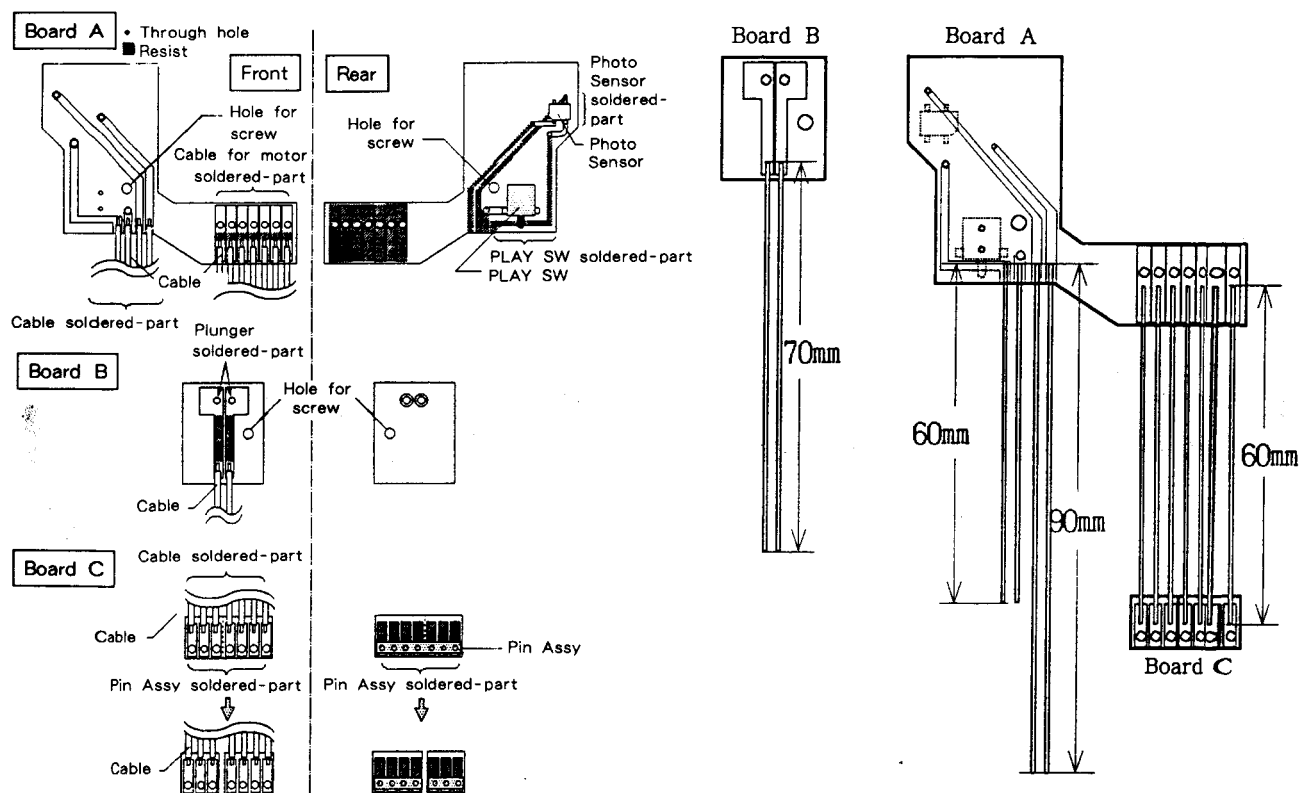
Use the jig kit (for 4ZM-1) to check the operations of the unit while the MAIN C.B is removed.

Parts name : 4ZM-1 Jig Kit Parts number : 09-001-323-010

1) Assembling the Jig Kit

Assemble the jig kit as follows :

- ① Cut a 6-pin flat cable into three 2-pin cables.
- ② Solder C-SW, PUSH and P-SNSR to board A.
- ③ Solder a 7-pin flat cable and the two 2-pin cables to board A.
- ④ Solder the 2-pin cable to board B.
- ⑤ Attach the Pin Assy to board C and solder it on one end of the 7-pin flat cable.



Details of Jig Kit and Assembly Procedure

Assembled Jig Kit

2) Attaching the Jig Kit

Board A

- Attach board A to the mechanism with the MAIN C.B fixing screw.
- Solder the motor terminals.
- Solder cables A and B to the photo sensor.
- Solder cables C and D to the PLAY SW.

Board B

- Attach board B to the mechanism with the MAIN C.B fixing screw.
- Solder the plunger terminal.
- Solder cables E and F to the rounds of the plunger on the MAIN C.B.

Board C

- Solder the Pin Assy on board C to the rounds of the motor on the MAIN C.B.

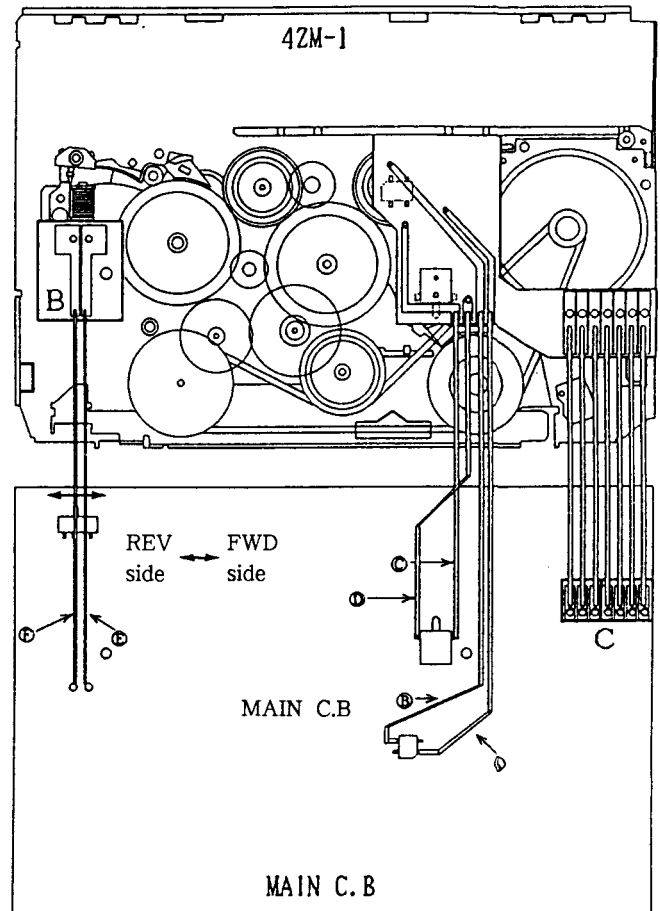
3) How to Use the Jig Kit

When the MAIN C.B is opened, the switches on the C.B are on the back side. To facilitate operations, use the remote controller.

- ① Connect the remote controller to the unit.
- ② Turn on the remote switch.
- ③ Short the C-SW terminal.
- ④ Set the F/R switch depending on the tape running direction.

4) Note

Wiring between the boards and the MAIN C.B differs with the units.
Refer to the service manual of the unit.



ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は“REFERENCE NAME LIST”を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

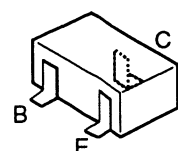
REF. NO	PART NO.	カンリ NO.	DESCRIPTION	REF. NO	PART NO.	カンリ NO.	DESCRIPTION
IC				C41	87-010-196-089		C-CAP, S 0.1-25 F
	87-002-423-089		IC, TA2002 FN(ER)	C42	87-010-196-089		C-CAP, S 0.1-25 F
	87-001-875-089		IC, BA1106 FS	C43	87-010-942-089		C-CAP, E 47-4
	87-017-775-080		IC, TB2003-008FN	C50	87-016-296-089		C-CAP, TN 22-4 SV(A) (EXCEPT 347)
	87-002-406-080		IC, TPIC326ADB	C51	87-010-452-089		C-CAP, 1-16 F
	87-017-826-080		IC, MM1085AFFE (547, 200)	C52	87-010-452-089		C-CAP, 1-16 F
	87-017-906-080		IC, MM1206AFFE (447, 347)	C53	87-010-452-089		C-CAP, 1-16 F
TRANSISTOR				C54	87-010-452-089		C-CAP, 1-16 F
	87-026-264-089		C-TR, RN1411	C55	87-010-184-089		C-CAP, S 3300P-50 B (EXCEPT 347)
	89-327-125-089		C-TR, 2SC2712GR	C56	87-010-184-089		C-CAP, S 3300P-50 B (EXCEPT 347)
	87-026-263-089		C-TR, RN1410	C57	87-010-196-089		C-CAP, S 0.1-25 F (EXCEPT 347)
	89-115-884-089		C-TR, 2SA1588Y	C57	87-012-141-089		C-CAP, S 0.22-16 F (347)
	87-026-262-089		C-TR, RN1407	C58	87-010-196-089		C-CAP, S 0.1-25 F (EXCEPT 347)
	89-508-804-089		C-FET, 2SK880 Y	C58	87-012-141-089		C-CAP, S 0.22-16 F (347)
	89-333-266-089		C-TR, 2SC3326B	C59	87-010-195-089		C-CAP, S 0.068-25 F (EXCEPT 347)
	89-113-625-089		C-TR, 2SA1362GR (TAPG)	C60	87-010-195-089		C-CAP, S 0.068-25 F (EXCEPT 347)
	87-026-581-089		C-TR, RN2405	C61	87-010-188-089		C-CAP, S 6800P-50 B (EXCEPT 347)
	87-026-467-089		C-TR, HNTC01F (GR)	C62	87-010-188-089		C-CAP, S 6800P-50 B (EXCEPT 347)
	87-026-567-080		C-TR, RN1611 (447, 347)	C63	87-010-452-089		C-CAP, 1-16 F
	87-026-470-089		C-TR, HNTC03FB	C64	87-010-452-089		C-CAP, 1-16 F
DIODE				C65	87-010-189-089		C-CAP, S 8200P-50 B (EXCEPT 347)
	87-020-027-089		C-DIODE, 1SS184 (EXCEPT 347)	C66	87-010-189-089		C-CAP, S 8200P-50 B (EXCEPT 347)
	87-001-165-089		C-DIODE, 1SS300	C70	87-010-452-089		C-CAP, 1-16 F
MAIN C. B				C71	87-015-621-089		C-CAP, TN 2.2-6.3
C1	87-010-172-089		C-CAP, S 330P-50 CH	C72	87-010-971-089		C-CAP, S 4700P-50 B J
C2	87-010-172-089		C-CAP, S 330P-50 CH	C73	87-015-923-089		C-CAP, TN 0.22-35
C3	87-010-172-089		C-CAP, S 330P-50 CH	C74	87-010-805-089		C-CAP, S 1-16F
C4	87-010-172-089		C-CAP, S 330P-50 CH	C80	87-015-923-089		C-CAP, TN 0.22-35
C5	87-016-296-089		C-CAP, TN 22-4 SV(A)	C81	87-010-196-089		C-CAP, S 0.1-25 F
C6	87-016-296-089		C-CAP, TN 22-4 SV(A)	C82	87-010-194-089		C-CAP, S 0.047-25 F
C7	87-010-958-089		C-CAP, S 0.01-25 B J	C83	87-010-196-089		C-CAP, S 0.1-25 F
C8	87-010-958-089		C-CAP, S 0.01-25 B J	C84	87-010-805-089		C-CAP, S 1-16 F
C9	87-010-198-089		C-CAP, S 0.022-25 B	C85	87-012-141-089		C-CAP, S 0.22-16 F
C10	87-010-198-089		C-CAP, S 0.022-25 B	C86	87-015-932-089		C-CAP, TN 0.47-20
C11	87-010-424-089		C-CAP, TN 4.7-4	C87	87-012-358-089		C-CAP, S 0.47-10FZ
C12	87-016-296-089		C-CAP, TN 22-4 SV(A)	C88	87-010-186-089		C-CAP, S 4700P-50 B
C13	87-010-853-089		C-CAP, E 220-4 H5.5	C89	87-010-805-089		C-CAP, S 1-16F (EXCEPT 347)
C14	87-010-452-089		C-CAP, 1-16 F	J1	87-099-495-019		JACK, 3.5 BLK (L)N4
C15	87-010-853-089		C-CAP, E 220-4 H5.5	J2	87-099-577-019		JACK, DC 3.75
C16	87-010-853-089		C-CAP, E 220-4 H5.5	LED1	87-017-828-080		C-LED, SEC1401C GRN
C17	87-010-196-089		C-CAP, S 0.1-25 F	LED2	87-017-829-080		C-LED, SEC190K ORN
C18	87-010-196-089		C-CAP, S 0.1-25 F	LED3	87-017-827-080		C-LED, SEC1201C RED
C19	87-016-296-089		C-CAP, TN 22-4 SV(A)	R1	87-022-343-089		C-RES, S 820-1/10W F
C20	87-010-196-089		C-CAP, S 0.1-25 F	R2	87-022-343-089		C-RES, S 820-1/10W F
C21	87-012-140-089		C-CAP, S 470P-50 CH	R3	87-022-344-089		C-RES, S 1K-1/10W F
C22	87-010-196-089		C-CAP, S 0.1-25 F	R4	87-022-344-089		C-RES, S 1K-1/10W F
C23	87-010-195-089		C-CAP, S 0.068-25 F	R7	87-022-371-089		C-RES, S 330K-1/10W F
C24	87-016-296-089		C-CAP, TN 22-4 SV(A)	R8	87-022-371-089		C-RES, S 330K-1/10W F
C25	87-010-853-089		C-CAP, E 220-4 H5.5	R9	87-022-357-089		C-RES, S 15K-1/10W F
C26	87-010-196-089		C-CAP, S 0.1-25 F (447, 347)	R10	87-022-357-089		C-RES, S 15K-1/10W F
C27	87-010-196-089		C-CAP, S 0.1-25 F	R93	87-022-366-089		C-RES, S 120K-1/10W F
C28	87-010-196-089		C-CAP, S 0.1-25 F (547, 200)	R94	87-022-372-089		C-RES, S 390K-1/10W F
C31	87-010-452-089		C-CAP, 1-16 F	R130	87-022-222-089		C-RES, S 2.2-1/10W F
C32	87-010-452-089		C-CAP, 1-16 F	S1	84-HK3-604-010		SW, LEAF 4ZM-1P
C33	87-010-193-089		C-CAP, S 0.033-25 F	S2	87-036-304-089		C-SW, SL 1-1-2
C34	87-010-193-089		C-CAP, S 0.033-25 F	S3	87-036-304-089		C-SW, SL 1-1-2 (347)
C35	87-010-186-089		C-CAP, S 4700P-50 B	S3	87-036-146-089		C-SW, SL 1-1-4 (EXCEPT 347)
C36	87-010-186-089		C-CAP, S 4700P-50 B	S4	87-036-145-089		C-SW, SL 1-1-3 (547, 200)
C37	87-010-197-089		C-CAP, S 0.01-25 B	S4	87-036-275-089		C-SW, SL 1-1-3 (447, 347)
C38	87-010-197-089		C-CAP, S 0.01-25 B	S5	87-036-237-089		C-SW, PUSH
C39	87-010-193-089		C-CAP, S 0.033-25 F	S6	87-036-236-089		C-SW, SL 1-1-2 (NC)
C40	87-010-193-089		C-CAP, S 0.033-25 F	S7	87-036-253-089		C-SW, TACT (547, 200)
				S7	87-036-367-089		C-SW, TACT PT-030-A (447, 347)
				S8	87-036-253-089		C-SW, TACT (547, 200)
				S8	87-036-367-089		C-SW, TACT PT-030-A (447, 347)
				S9	87-036-253-089		C-SW, TACT (547, 200)
				S9	87-036-367-089		C-SW, TACT PT-030-A (447, 347)
				S10	87-036-253-089		C-SW, TACT (547, 200)
				S10	87-036-367-089		C-SW, TACT PT-030-A (447, 347)
				S11	87-036-253-089		C-SW, TACT (547, 200)

REF. NO	PART NO.	カリ NO.	DESCRIPTION
S11	87-036-367-089		C-SW, TACT PT-030-A(447, 347)
SFR1	87-024-405-089		C-SFR, 4.7K RH03A3A
SNR1	87-017-793-080		P-SNSR, GP2L27
TH1	87-026-615-089		C-THMS, SN20-3E331KT
TM1	84-HK3-603-010		TERM ASSY PB-4S(EXCEPT 347)
VR1	87-024-640-089		C-VR, 20KCX2 DIA14

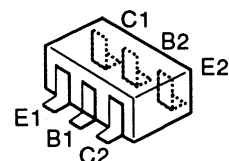
HEAD FLEX. C. B

MOTOR GOV. C. B

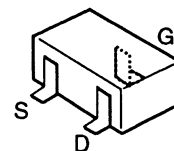
TRANSISTOR ILLUSTRATION



2SA1362
2SA1588
2SC2712
2SC3326
RN1407
RN1410
RN1411
RN2405



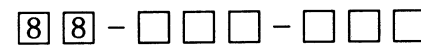
RN1611
HN1C01F
HN1C03F



2SK880

チップ抵抗部品コード/CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



A
抵抗部品コード
Resistor Code

桁表示
Figure

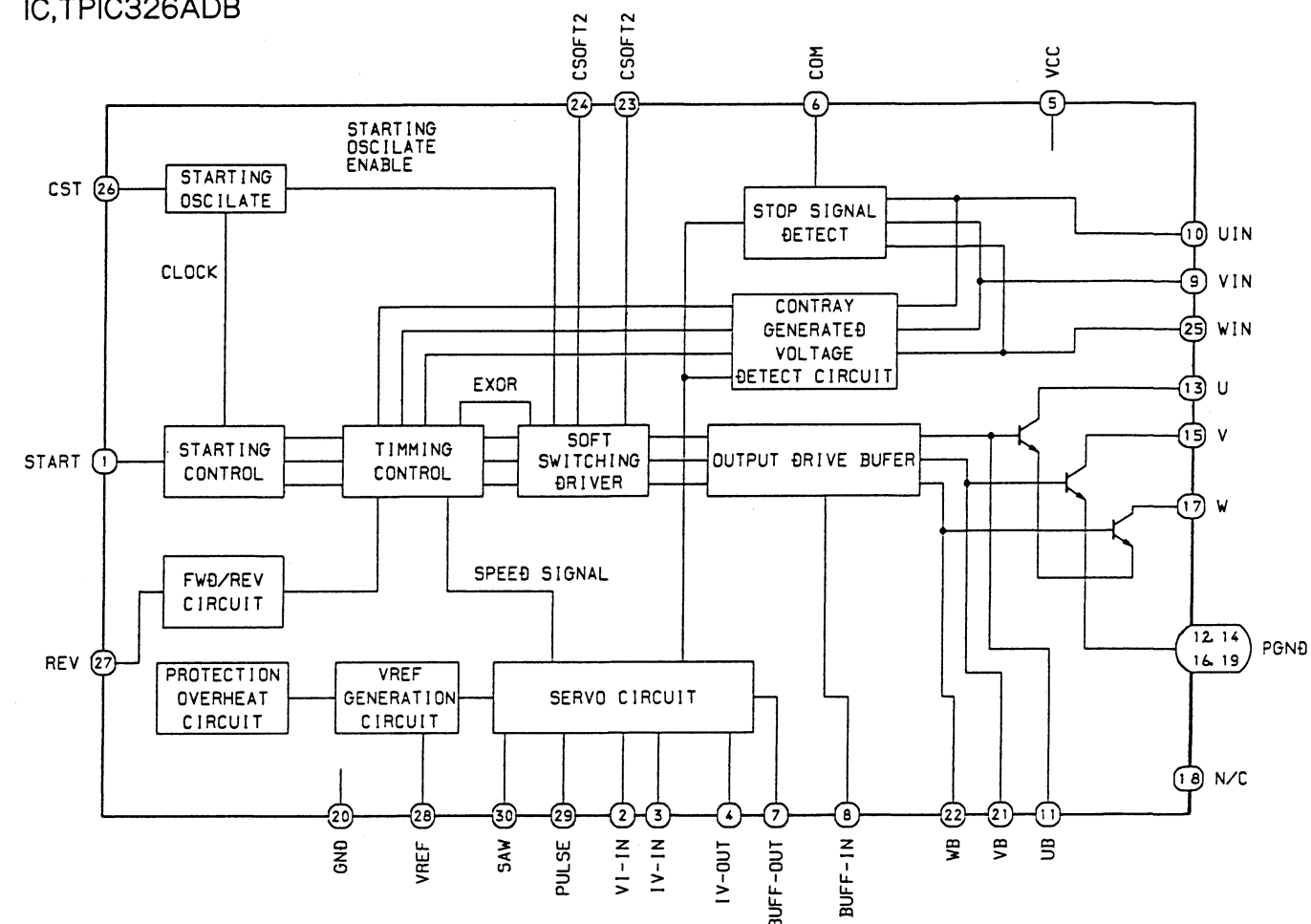
抵抗値
Value of resistor

チップ抵抗
Chip resistor

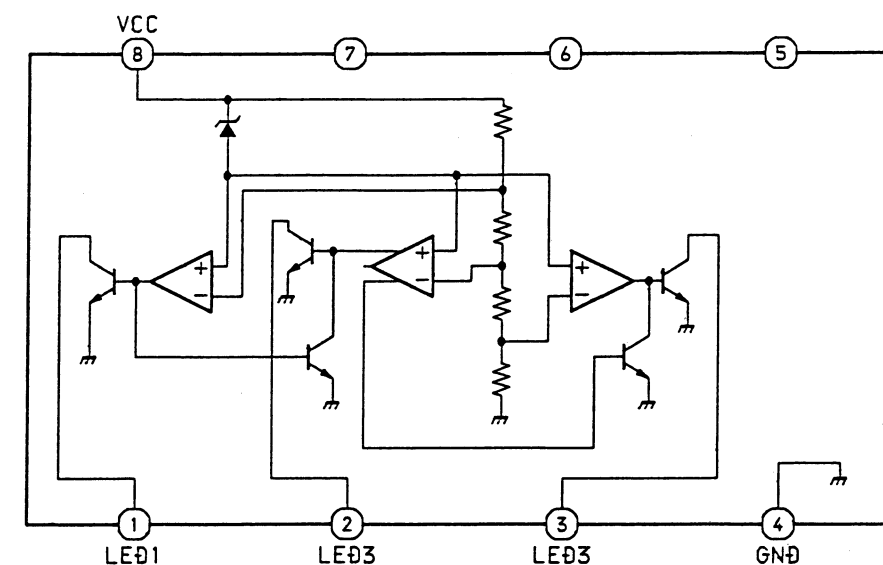
Chip Resistor				Dimensions/寸法 (mm)				Resistor Code : A
Wattage 容量	Type 種類	Tolerance 許容誤差	Symbol 記号	Form/外形	L	W	t	抵抗コード : A
1/32W	1608	± 5 %	C1		1.6	0.8	0.35	108
1/10W	2125	± 5 %	C1		2	1.25	1.45	118
1/8W	3126	± 5 %	C1		3.2	1.6	0.5 ~0.7	128

IC BLOCK DIAGRAM

IC,TPIC326ADB

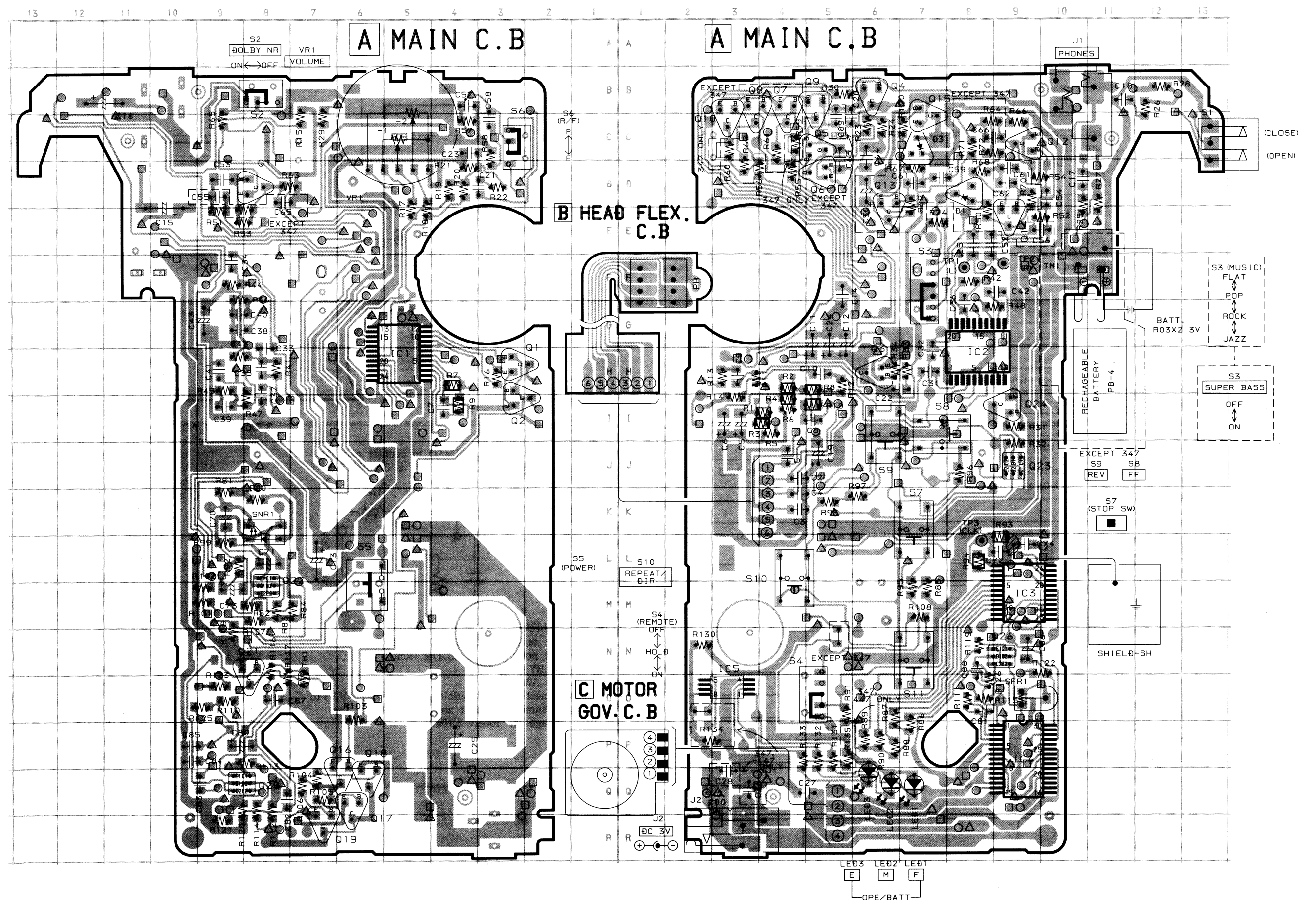


IC,MM1085



B
HEAD FLEX C.B





IC DESCRIPTION

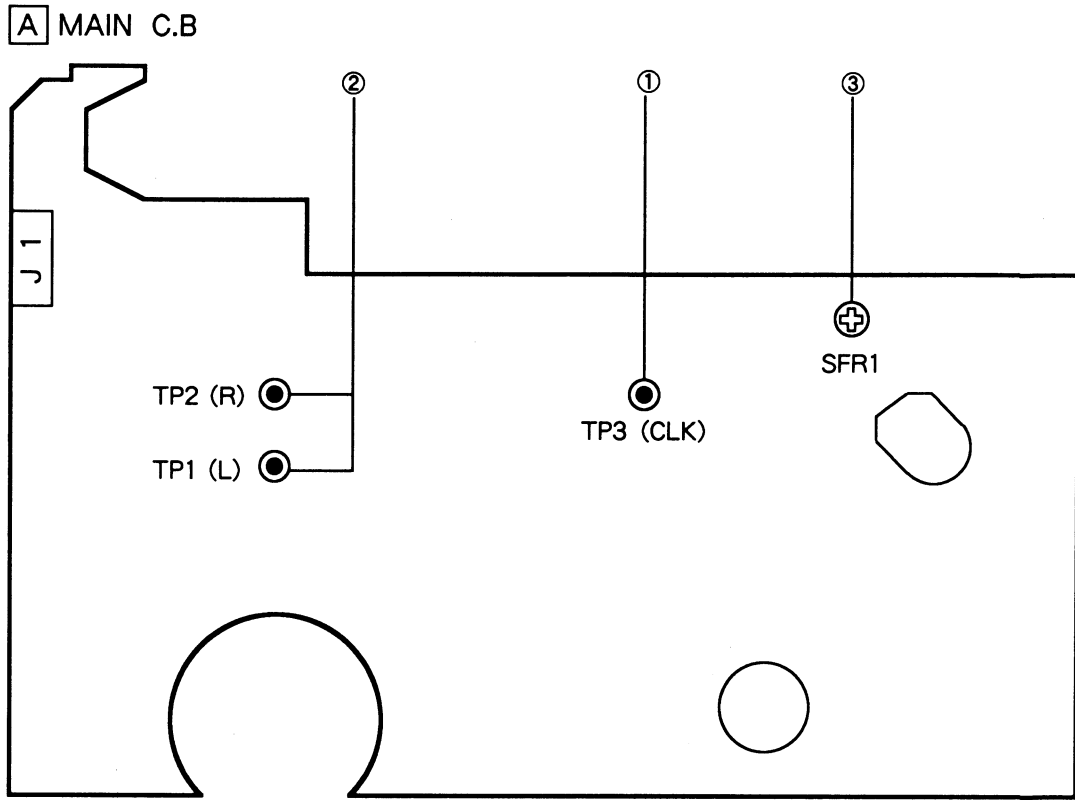
IC,TB2003 – 008 – FN

Pin No.	Pin Name	I/O	Description
1	GND	—	Connected to GND.
2	OSC	—	For generating the system clock: reference frequency oscillated by the externally connected C and R. $f_{osc} = 3.2 \text{ kHz}$
3	$\overline{CL}$	I	The "L" level input resets the internal circuits. All the output terminals turn off the output transistors and system clock stops. The "H" level input outputs signals and the program starts from ROM address "0".
4	SP-COMP	I	Two-wire remote control input pin. Connected to the input of the internal operation amplifier, and detects 5 levels by comparing with the reference voltage.
5	T3	—	Not used.
6	T2	—	Not used.
7	T1	—	Not used.
8	R-REC	—	Not used.
9	MS. BS IN	—	Not used.
10	C-SW	I	The "L" level signal sets the cassette execution command to standby mode.
11	TU-IN	—	Note used.
12	AUTO	I	The AC input sets the timer 2 seconds.
13	P-SW	I	"L" level when PLAY and REC, and "H" level in the other modes.
14	F/R	I	The mask switch which is "L" level when REVERSE and "H" level when FORWARD switches I/O, and F/R display.
15	REV MODE	I	Not used.
16	DIR	O	The "H" level does not allow to record in FORWARD mode. The motor rotating direction is reversed.
17	BRK	O	Open collector output/BRK ON-OFF SW output. "L" when the motor is rotating.
18	M-HI	—	Not used.
19	M-LOW	O	Open collector output which switches the motor ON and OFF.
20	MUTE	O	Emitter follower output, which is the mute signal. "H" level output while the mechanism is operating.
21	REC PL	—	Not used.
22	PLAY MD	O	"H" level output which drives the MD plunger during playing.
23	ALARM	O	Pulse-like ALARM output when each function is operating.
24	VCC	—	2 V DC power supply pin.

IC,TB2003 – 008 – FN KEY MATRIX

	F/R		F/R
FWD STOP	H	REV STOP	L
FWD PLAY	H	REV PLAY	L
FWD FF	H	REV FF	L
FWD REW	H	REV REW	L

ADJUSTMENT

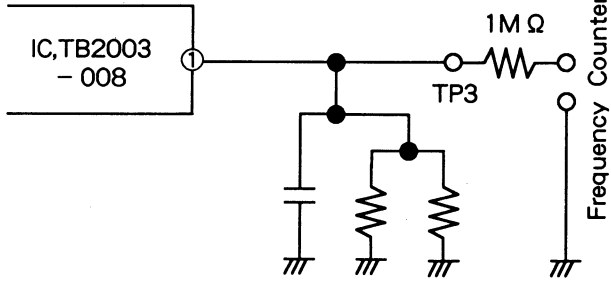


1.Clock Frequency Check

Settings : Test point : TP3

Method : Connect a resistor (1M Ω) to counter and TP3.

Check the Frequency at TP3 is 3200Hz ± 20 Hz



2.Dolby level check

Settings : Test tape : TTS – 200 (TTA – 161,TCC – 130)

Test point : TP1 (Lch),TP2 (Rch)

DOLBY SW : OFF

DSL SW : OFF

Method : Connect an electrolytic capacitor (10 μ F/16V) to measured equipment and TP1 (6),check the voltage for 100mV $\pm$ 10mV.

3.Tape speed ADJ.

Settings : Test tape : TTA – 100

Test point : Phones jack (J1)

ADJ. location : SFR1

Method : Play back the test tape, adjust for 3000Hz at FWD and ± 45 Hz at REV.

4.Azimuth ADJ.

This model is no azimuth ADJ.

5.BATT light level indication check

Settings : Supply power to a charging battery terminal ASSY from a regulator power supply.

Method : Decrease the output voltage of a regulated power supply for less 2V and check that it's voltage of below light.

(PX547, LX200)

1.95V $\pm$ 0.04V Light off F (Full) LED

1.85V $\pm$ 0.04V Light off M (Mid) LED

1.80V $\pm$ 0.04V Light off E (Emp) LED

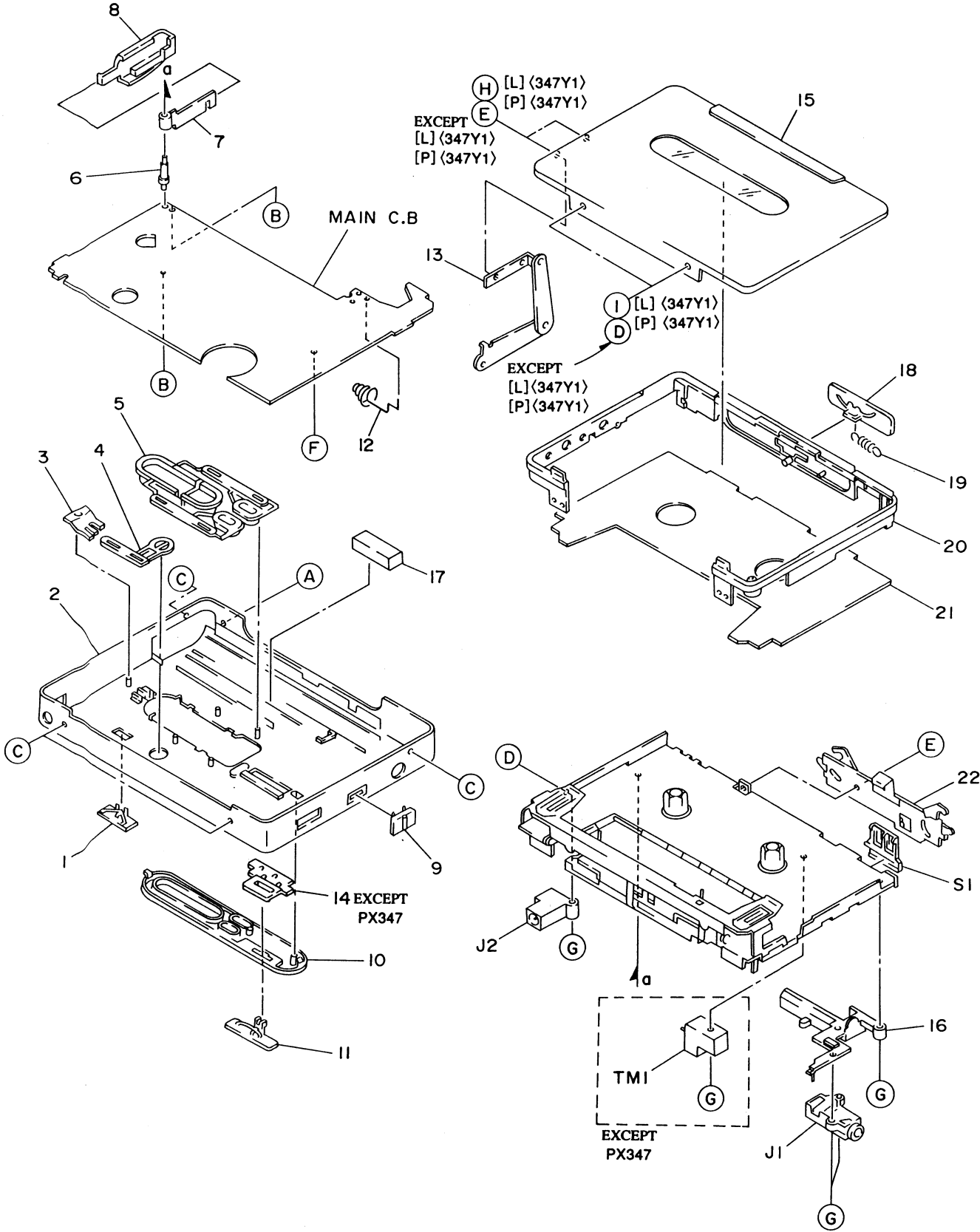
(PX447, PX347)

2.45V $\pm$ 0.04V Light off F (Full) LED

2.30V $\pm$ 0.04V Light off M (Mid) LED

2.10V $\pm$ 0.04V Light off E (Emp) LED

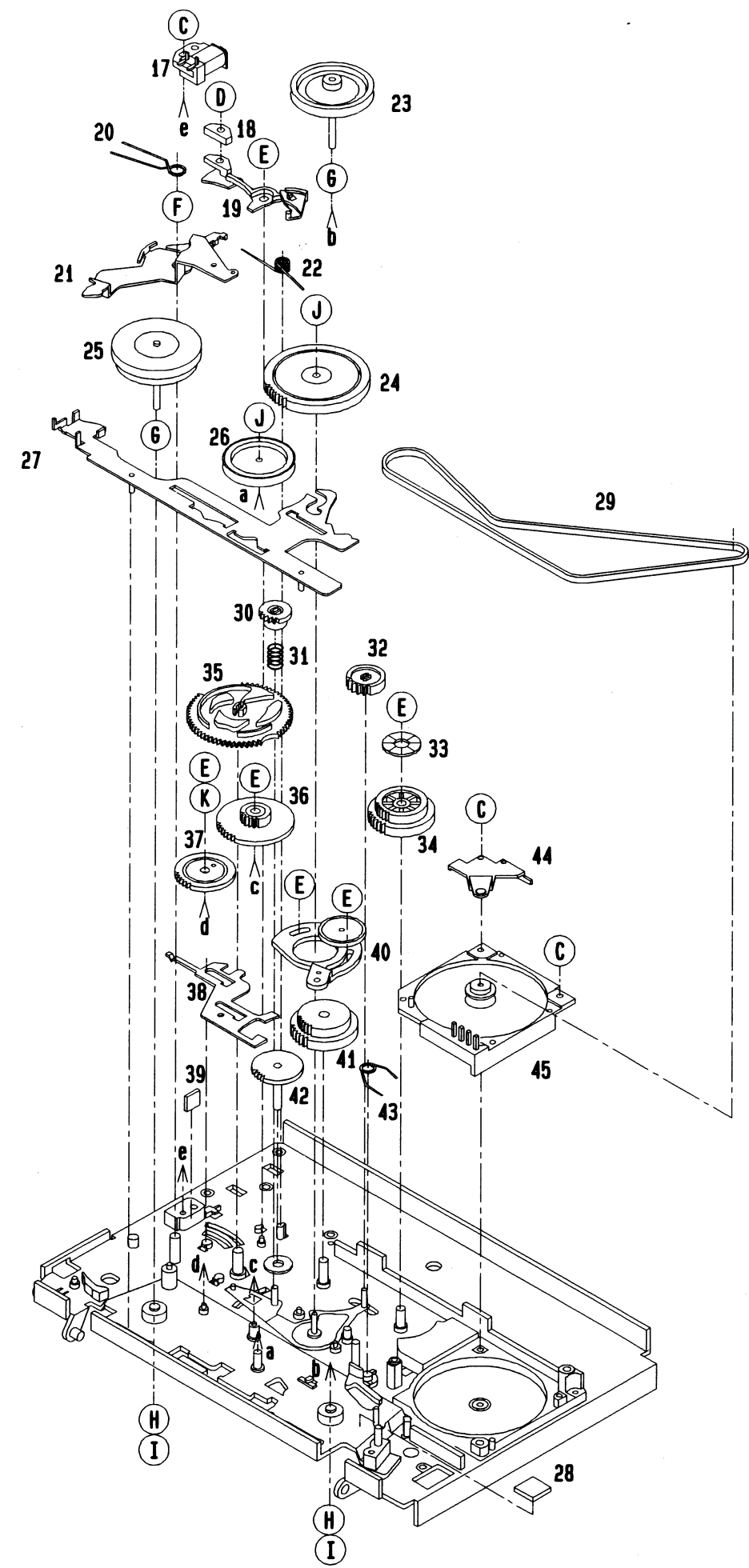
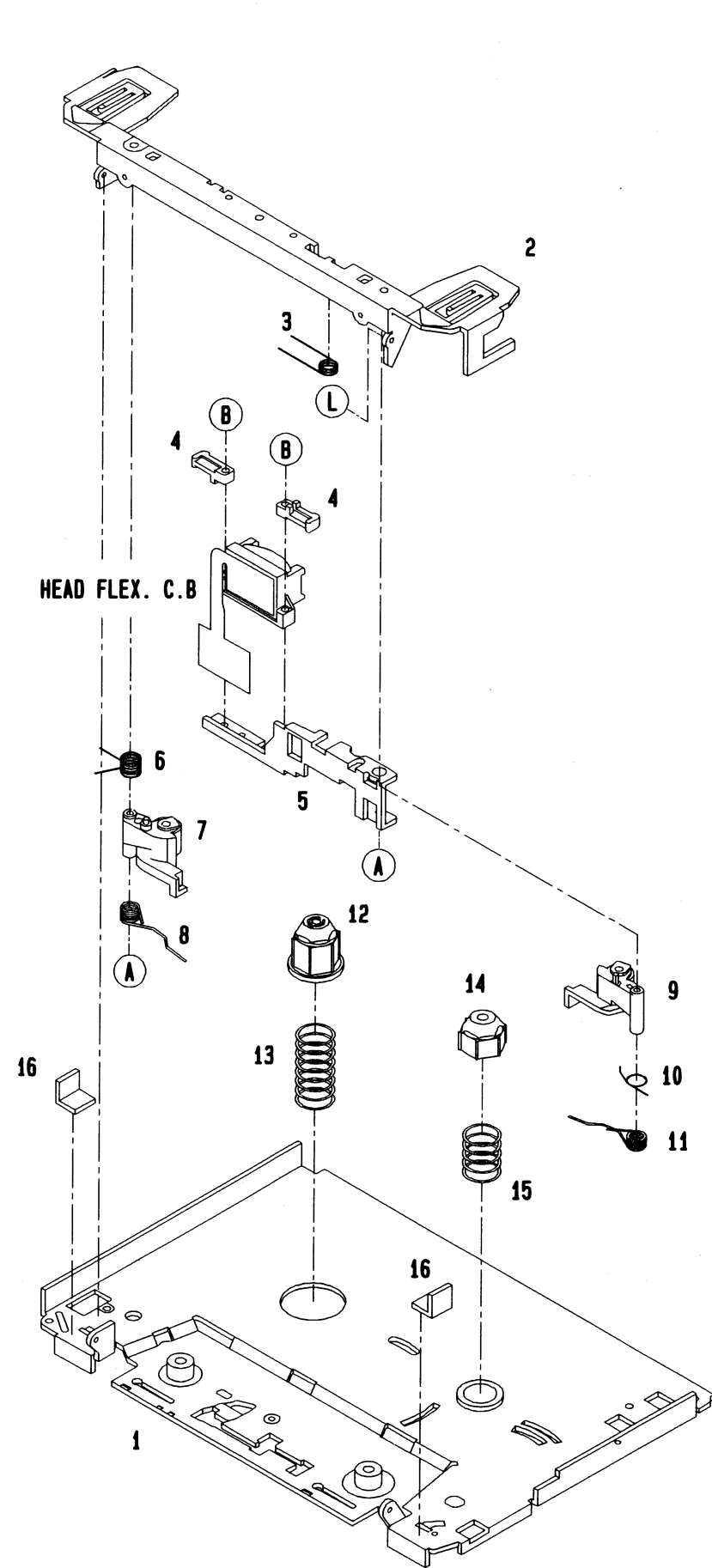
MECHANICAL EXPLODED VIEW 1/1



MECHANICAL PARTS LIST 1/1

DESCRIPTIONで判断できない物は“REFERENCE NAME LIST”を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カンリ NO.	DESCRIPTION	REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	84-HK6-011-019		KNOB, SL H (EXCEPT PX347)	14	84-HK6-013-019		PLATE, IND (PX547, PX447, LX200)
1	84-HKC-012-019		KNOB, SL H (PX347)	15	09-028-133-010		LID, CASS ASSY [H] (PX547)
2	84-HK6-003-019		CAB, REAR [H] (PX547)	15	09-028-146-010		LID, CASS ASSY [R] (PX547)
2	84-HK6-019-019		CAB, REAR [H] (PX447)	15	09-028-134-010		LID, CASS ASSY [G] (PX547)
2	84-HKC-003-019		CAB, REAR [B] (PX347)	15	09-028-135-010		LID, CASS ASSY [H] (PX447)
2	84-HK6-033-019		CAB, REAR [G] (LX200)	15	09-028-147-010		LID, CASS ASSY [R] (LX200)
2	84-HK6-025-019		CAB, REAR [G] (PX547)	15	09-028-148-010		LID, CASS ASSY [G] (LX200)
2	84-HKC-013-019		CAB, REAR [L] (PX347)	15	09-028-136-010		LID, CASS ASSY [B] (PX347)
2	84-HKC-014-019		CAB, REAR [P] (PX347)	15	09-028-137-010		LID, CASS ASSY [L] (PX347)
2	84-HK6-038-019		CAB, REAR [R] (PX547)	15	09-028-138-010		LID, CASS ASSY [P] (PX347)
2	84-HK6-030-019		CAB, REAR [R] (LX200)	16	84-HK6-203-019		HLDR, CONT
3	84-HK6-017-019		LENS, LED	17	84-HK6-208-019		CUSH, BAT
4	84-HK6-018-019		KEY, REPLAY	18	84-HK3-011-010		KNOB, SL OPEN
5	84-HK6-008-019		KEY, CONT [H, R, L, P]	19	84-HK3-214-010		E-SP, LOCK
5	84-HKC-009-019		KEY, CONT [G, B]	20	84-HK6-004-019		FRAME [H, R, L, P]
6	84-HK6-204-010		SHAFT, BAT	20	84-HKC-008-019		FRAME [G, B]
7	84-HK6-201-010		BAT, CONT P	21	84-HK6-016-010		PANEL, CHAS (PX547)
8	84-HK6-007-019		LID, BAT [H]	21	84-HK6-034-010		PANEL, CHAS (LX200)
8	84-HKC-007-019		LID, BAT [B]	21	84-HK6-020-010		PANEL, CHAS (PX447)
8	84-HK6-026-019		LID, BAT [G]	21	84-HKC-004-010		PANEL, CHAS (PX347)
8	84-HKC-020-019		LID, BAT [L]	22	84-HK3-206-010		T-LOCK ASSY
8	84-HKC-021-019		LID, BAT [P]	A	87-067-360-019		S-SCRW, +1.4-3.5 (BLK)
8	84-HK6-035-019		LID, BAT [R]	B	87-067-385-019		SCREW VT 1.4X2.5 HL
9	84-HKC-023-019		KNOB, SL D [L, P] (PX347)	C	87-067-511-019		S-SCRW, +1.4-2 (BLK)
9	84-HK6-010-019		KNOB, SL D (EXCEPT [L, P] PX347)	D	87-067-807-019		S-SCREW +1.4-0.7
10	84-HKC-005-019		PANEL, CAB [B]	E	87-067-734-019		S-SCRW, 1.4-1.4 BLK N
10	84-HK6-005-019		PANEL, CAB [H, R]	F	87-067-746-019		SCREW-SERR M1.4-2
10	84-HK7-015-019		PANEL, CAB [G]	G	87-262-509-319		V+1.4-4 BLK
10	84-HKC-019-019		PANEL, CAB [L, P]	H	87-067-735-019		S-SCRW, 1.4-1.4 CR N [L, P] (PX347)
11	84-HK6-009-019		KNOB, SL MSP [H, R]	I	87-078-102-019		S-SCRW, 1.4-0.7 CR N [L, P] (PX347)
11	84-HK7-014-019		KNOB, SL MSP [G]				
11	84-HKC-006-019		KNOB, SL SB [B]				
11	84-HKC-022-019		KNOB, SL SB [L, P]				
12	84-HK6-202-019		BAT, CONT M				
13	84-HK6-210-010		HINGE, CASS ASSY				

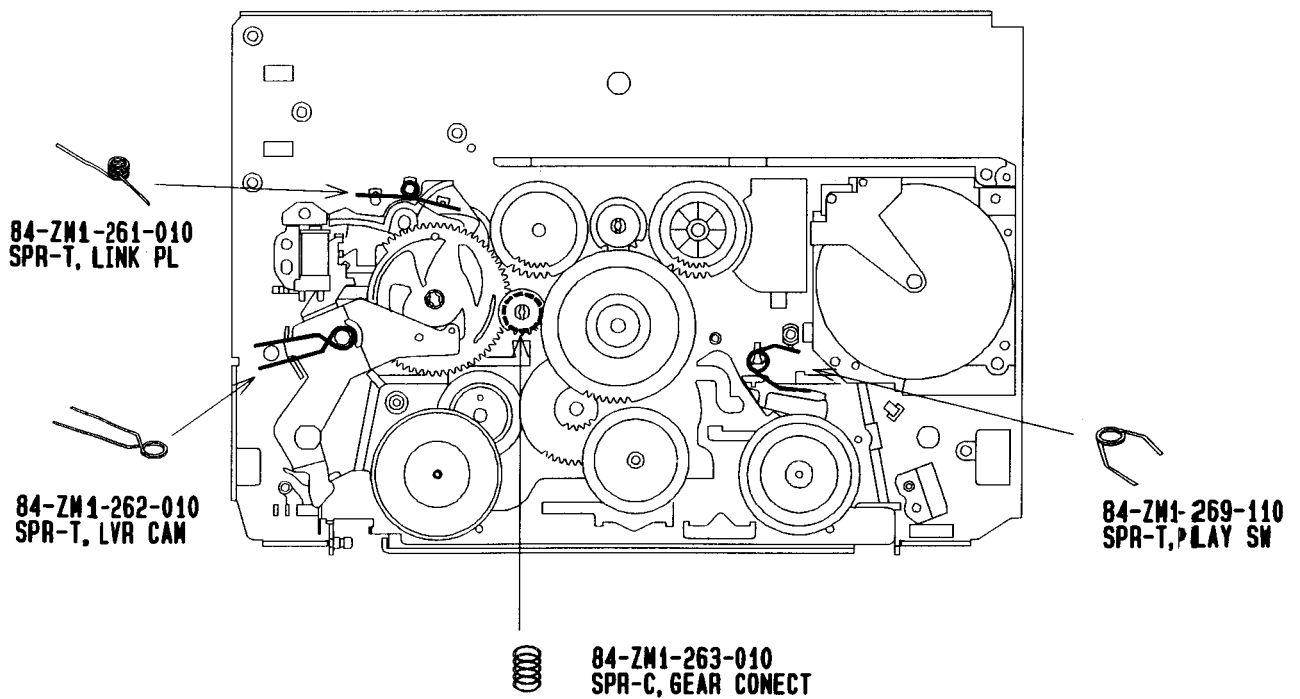
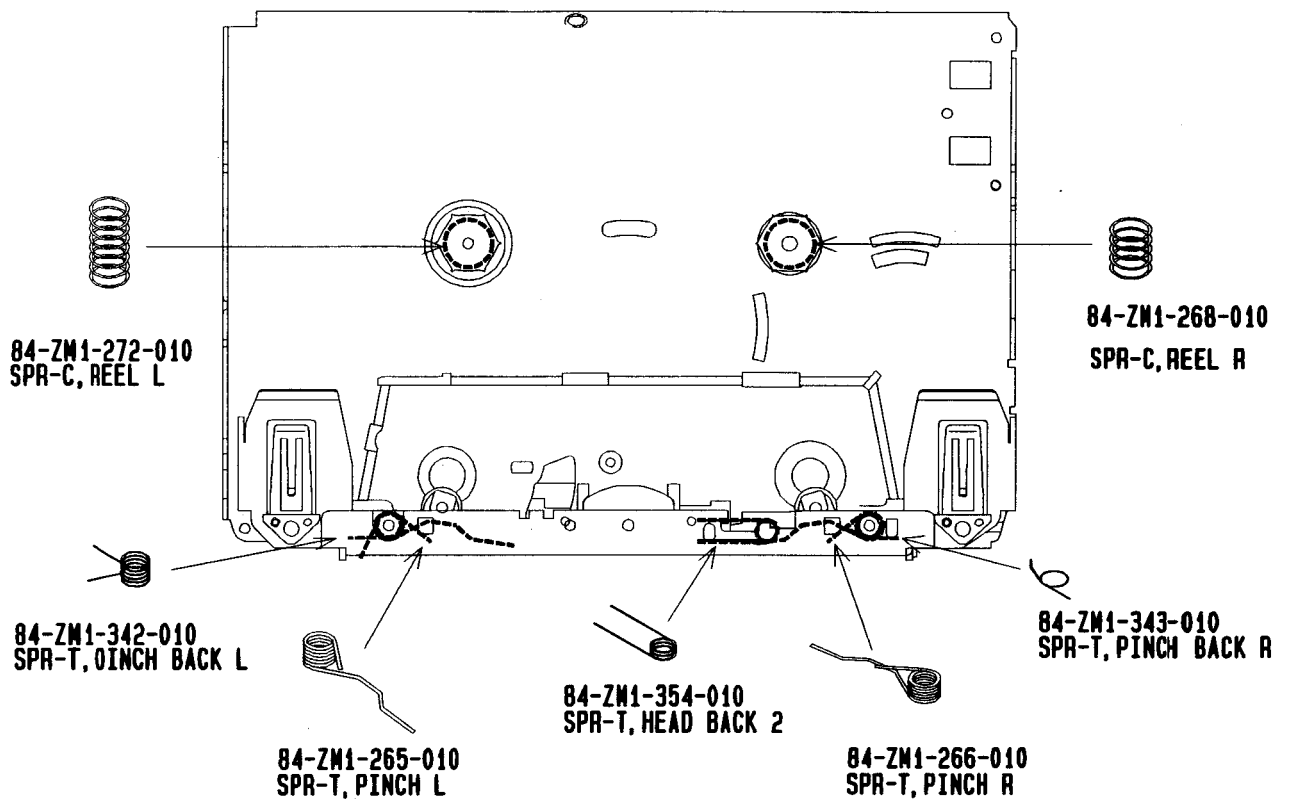


TAPE MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は“REFERENCE NAME LIST”を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カンリ NO.	DESCRIPTION	REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	84-ZM1-201-010		OUT-SERT ASSY	31	84-ZM1-263-010		SPR-C, GEAR CONECT
2	84-ZM1-212-410		HLDER CASSET ASSY P	32	84-ZM1-225-010		GEAR FR
3	84-ZM1-354-010		SPR-T, HEAD BACK 2	33	84-ZM1-271-010		SH AUTO
4	84-ZM1-259-010		ARM, STOP	34	84-ZM1-240-010		GEAR IDLE B
5	84-ZM1-216-010		ARM HEAD	35	84-ZM1-221-010		GEAR CAM
6	84-ZM1-342-010		SPR-T PINCH BACK L	36	84-ZM1-223-210		GEAR LINK B
7	84-ZM1-258-010		ARM ASSY, PINCH L2	37	84-ZM1-222-010		GEAR LINK A
8	84-ZM1-265-010		SPR-T, PINCH L	38	84-ZM1-217-010		L, FR LOCK
9	84-ZM1-256-010		ARM ASSY, PINCH R2	39	87-078-119-010		SH, 2.5-2.5-0.55
10	84-ZM1-343-010		SPR-T PINCH BACK R	40	84-ZM1-210-010		LVR ASSY, T-UP
11	84-ZM1-266-010		SPR-T, PINCH R	41	84-ZM1-224-010		GEAR IDLE A
12	84-ZM1-227-110		GEAR REEL L	42	84-ZM1-228-010		GEAR REEL R
13	84-ZM1-272-010		SPR-C, REEL L	43	84-ZM1-269-110		SPR-T PLAY SW
14	84-ZM1-220-110		REEL CAP, R	44	84-ZM1-379-010		SPR-P, MOT
15	84-ZM1-268-010		SPR-C, REEL R	45	84-ZM1-358-510		MOT, ASSY 4P(A)
16	84-ZM1-349-010		TAPE GUIDE STOPPER	A	87-067-569-010		PW0.83-2.5-0.25
17	84-ZM1-601-010		SOL, MD	B	87-078-099-010		S-SCRW, V+1.4-6(3)
18	84-ZM1-602-010		CHIP, SOL	C	87-067-384-010		VT1.4-3.5HL
19	84-ZM1-219-010		LINK PL	D	87-067-367-010		PW, 0.95-2.6-0.25 C
20	84-ZM1-262-010		SPR-T, LVR CAM	E	87-067-860-010		PW, 3-0.95-0.4
21	84-ZM1-204-010		LVR ASSY, CAM	F	87-078-018-010		PW, 1.55-3.5-0.25 C60
22	84-ZM1-261-010		SPR-T, LINK PL	G	87-078-071-110		SW, 1.2-3-0.25
23	84-ZM1-350-010		FW ASSY L 2	H	87-078-101-010		RW, 1.21-2.4-0.25
24	84-ZM1-231-210		SLIP ASSY	I	87-078-065-010		SH, 0.9-2.25-0.25 SLT
25	84-ZM1-238-010		FW ASSY R	J	87-067-693-010		PW, 3-0.8-0.25 SLT
26	84-ZM1-280-010		PULLY PM	K	87-078-115-010		SH, 1.91-2.9-0.05
27	84-ZM1-208-010		LVR ASSY HEAD	L	87-078-087-010		PW, 1-3-0.4 C60
28	87-078-118-010		SH, 3.7-3.7-1.05				
29	84-ZM1-218-010		BELT				
30	84-ZM1-226-010		GEAR CAM C				

SPRING APPLICATION POSITION



■ ACCESSORIES/PACKAGE LIST

DESCRIPTIONで判断できない物は“REFERENCE NAME LIST”を参照してください。
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REF. NO	PART NO.	カリ NO.	DESCRIPTION
1	84-HK6-905-019		IB, EX (547, 447, 200)
1	84-HKC-901-019		IB, Y (347)
2	82-HK3-951-010		CARRYING CAGE (200)
3	87-042-176-019		AC-207E2 (C) (AE)
3	87-042-177-019		AC-207K (C) (AK)
4	87-047-151-010		PB-4S NAY (R) (547, 200)
5	87-048-278-019		HP-24NA (347)
5	87-048-290-019		HP-R402NA (547, 447)
5	87-048-297-019		HP-R402NA (G) (200)
5	87-048-298-019		HP-R402NA (R) (200)

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, SERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER
サージサプレッサ	SERGESUPPRESSOR
セラコン	CAP,CERA

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL
ジグアーム	ARM,SHAFT
ジグガイド	GUIDE,SHAFT
ストラップ	STRAP
トクナベ	S-SCRW
ヒンジ	HINGE
ヒンジビス	S-SCRW
ビスセレート	SCRW,SERRART

サービス技術ニュース		
番 号	連絡内容	
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